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BOYS' AND GIRLS' MAGAZINE.

"Joe and two others were despatched to row it ashore."—**See p. 31.**

MARCO PAUL'S

ADVENTURES

IN PURSUIT OF KNOWLEDGE.

FORESTS OF MAINE.

BY THE AUTHOR OF

ROLLO, JONAS, AND LUCY BOOKS.

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PREFACE.

The design of the series of volumes, which it is intended to issue under the general title of Marco Paul's Adventures in the Pursuit of Knowledge, is not merely to entertain the reader with a narrative of juvenile adventures, but also to communicate, in connexion with them, as extensive and varied information as possible, in respect to the geography, the scenery, the customs and the institutions of this country, as they present themselves to the observation of the little traveller, who makes his excursions under the guidance of an intelligent and well-informed companion, qualified to assist him in the acquisition of knowledge and in the formation of character. The author will endeavor to enliven his narrative, and to infuse into it elements of a salutary moral influence, by means of personal incidents befalling the actors in the story. These incidents are, of course, imaginary—but the reader may rely upon the strict and exact truth and fidelity of all the descriptions of places, institutions and scenes, which are brought before his mind in the progress of the narrative. Thus, though the author hopes that the readers, who may honor these volumes with their perusal, will be amused and interested by them, his design throughout will be to ins ruct rather than to entertain.

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MARCO PAUL IN THE FORESTS OF MAINE.

CHAPTER I.

THE MOUTH OF THE KENNEBEC.

One summer, Forester and Marco Paul formed a plan for going to Quebec. Marco was very much interested in going to Quebec, as he wanted to see the fortifications. Forester had told him that Quebec was a strongly-fortified city, being a military post of great importance, belonging to the British government. Marco was very much pleased at the idea of seeing the fortifications, and the soldiers that he supposed must be placed there to defend them.

On their way to Quebec, they had to sail up the Kennebec in a steamboat. As they were passing along, Marco and Forester sat upon the deck. It was a pleasant summer morning. They had been sailing all night upon the sea, on the route from Boston to the mouth of the Kennebec. They entered the mouth of the Kennebec very early in the morning, just before Forester and Marco got up. And thus it happened that when they came

up upon the deck, they found that they were sailing in a river. The water was smooth and glassy, shining brilliantly under the rays of the morning sun, which was just beginning to rise.

The shores of the river were rocky and barren. Here and there, in the coves and eddies, were what appeared to Marco to be little fences in the water. Forester told him that they were for catching fish. The steamboat moved very slowly, and every moment the little bell would ring, and the engine would stop. Then the boat would move more slowly still, until the bell sounded again for the engine to be put in motion, and then the boat would go on a little faster.

"What makes them keep stopping?" said Marco.

"The water is very low this morning," said Forester, "and they have to proceed very carefully, or else they will get aground."

"What makes the water so low now?" asked Marco.

"There are two reasons," replied Forester. "It is late in the summer, and the streams and springs are all low; so that there is but little water to come down from the country above. Then, besides, the tide is low this morning in the sea, and that causes what water there is in the bed of the river to run off into the sea."

"Is not there any tide in the river?" asked Marco.

"No," said Forester, "I suppose there is not,

strictly speaking. That is, the moon, which attracts the waters of the ocean, and makes them rise and fall in succession, produces no sensible effect upon the waters of a river. But then the rise and fall of the sea itself causes all rivers to rise and fall near their mouths, and as far up as the influence of the sea extends. You see, in fact, that it must be so."

"Not exactly," said Marco.

"Why, when the water in the sea," continued Forester, "at the mouth of the river is very low, the water in the river can flow off more readily, and this makes the water fall in the river itself. On the other hand, when the water in the sea is high, the water cannot run out from the river, and so it rises. Sometimes, in fact, the sea rises so much that the water from the sea flows up into the river, and makes it salt for a considerable distance from its mouth."

"I wonder whether the water is salt here," said Marco.

"I don't know," said Forester.

"If we had a pail with a long rope to it," said Marco, "we could let it down and get some, and try it."

"We could let the pail down, but I doubt very much whether we could get any water," said Forester. "It is quite difficult to drop the pail in such a manner as to get any water when the vessel is under way."

"I should like to *try*," said Marco.

"You can find out whether the water is salt easier than that," said Forester. "You can let a twine string down, and wet the end. That will take up enough for a taste."

"Well," said Marco, "if I 've got a string long enough." So saying, he began to feel in his pockets for a string.

He found a piece of twine, which he thought would be long enough, but, on trial, it appeared that it would not reach quite to the water. Forester then tied it to the end of his cane, and allowed Marco to take the cane, and hold it over the side of the vessel; and by this means he succeeded in reaching the water, and wetting the end of the string. He could, after all, succeed in wetting only a small part of the string, for it was drawn along so rapidly by the motion of the boat, that it skipped upon the surface of the water without sinking in.

At length, however, after he had got the end a little wetted, he drew it up and put it in his mouth.

"How does it taste?" said Forester.

The question was hardly necessary, for the *faces* which Marco made showed sufficiently plain that the water was bitter and salt.

"Yes, it is salt," said he. Then, suddenly casting his eye upon a long dark-looking substance, which just then came floating by, he called out,

"Why, Forester, what is that?"

"A log," said Forester.

The log was round and straight, and the ends were square. The log glided rapidly by, and soon disappeared.

"It is a pine log," said Forester. "There are vast forests of pine trees in this state. They cut down the trees, and then cut the trunks into pieces of moderate length, and draw them on the snow to the rivers. Then, in the spring, the waters rise and float the logs down. This is one of these logs floating down. Sometimes the river is quite full of them."

"Where do they go?" asked Marco.

"Oh, men stop them all along the river, and put them into booms, and then fasten them together in rafts."

"How do they fasten them together?" asked Marco.

"They drive a pin into the middle of each log, and then extend a rope along, fastening it to each pin. In this manner, the rope holds the logs together, and they form a long raft. When they catch the logs in booms, they afterwards form them into rafts, and so float them down the river to the mills, where they are to be sawed."

"Can men stand upon the rafts?" said Marco.

"Yes," replied Forester, "very well."

"They make a floor of boards, I suppose," said Marco.

"No," replied Forester; "they stand directly upon the logs."

"I should think the logs would sink under them," replied Marco, "or at least roll about."

"They sink a little," replied Forester; "just about as much as the bulk of the man who stands upon them."

"I don't know what you mean by that, exactly," said Marco.

"Why, the rule of floating bodies is this," rejoined Forester. "When any substance, like a cake of ice, or a log of wood, or a boat, is floating upon the water, a part of it being above the water and a part under the water, if a man steps upon it, he makes it sink enough deeper to submerge a part of the wood or ice as large as he is himself. If there is just as much of the wood or ice above the water as is equal to the bulk of the man, then the man, in stepping upon it, will sink it just to the water's edge."

"But perhaps one man would be heavier than another man," said Marco.

"Yes," replied Forester; "but then he would be larger, and so, according to the principle, he would make more wood sink before the equilibrium was reached."

"What is *equilibrium?*" asked Marco.

"Equilibrium is an equality between two forces," replied Forester.

"I don't see what two forces there are," said Marco.

"There is the weight of the man pressing down

wards," said Forester, "for one, and the buoyant power of the water, that is, its upward pressure, for the other. The weight of the man remains constantly the same. But the upward pressure of the water increases in proportion as the log sinks into it. For the deeper the log sinks into the water, the more of it is submerged, and it is more acted upon and pressed upward by the water. Now, as one of these forces remains constant, and the other increases, they must at length come to be equal, that is, in equilibrium; and then the log will not sink any farther. That's the philosophy of it, Marco."

Marco did not reply, but sat looking at the barren and rocky shores of the river, as the boat glided by them. Presently another log came into view.

"There," said Forester, "look at that log, and see whether you think that you could float upon it."

"Yes," said Marco, "I think I could."

"It depends," said Forester, "on the question whether the part of it which is out of water is as big as you are."

"I think it is," said Marco.

"Yes," added Forester, "I have no doubt that it is."

"Only I should roll off," said Marco.

"True," replied Forester; "but the mill-men, who work about the logs, acquire astonishing dexterity in standing upon them. If there is only enough of the log above water to equal their bulk,

so that it has buoyant power enough to float them, they will keep it steady with their feet, and sail about upon it very safely."

"I should like to try," said Marco.

"Perhaps we shall have an opportunity at some place on the river," said Forester.

Here Marco suddenly interrupted the conversation by pointing up the river to a column of smoke and steam which he saw rising beyond a point of land which was just before them.

"Here comes another steamboat," said he. "See, Forester."

"No," said Forester, "I believe that is a steam mill."

"A steam mill!" repeated Marco.

"Yes," replied Forester. "They have steam mills and tide mills to saw up the logs in this part of the river. Farther up, where there are waterfalls on the river, or on the streams which empty into it, they build mills which are carried by water. I presume that that is a steam mill."

At this moment, Marco's attention was diverted from the steam mill by a boat which came gliding into the field of view. There was one man in the boat rowing it. Another sat in the stern, with a pole in his hand. The pole had an iron hook in the end of it. A short distance before the boat was a log floating upon the water. The oarsman was rowing the boat towards the log. He brought it up to it in such a manner that the other man

could strike his hook into it. When this was done, the oarsman began to pull the boat towards the shore, drawing the log with it.

By this time the whole group disappeared from Marco's view, behind a boat which was hanging on the quarter of the steamer. Marco, who wished to watch the whole proceeding, left Forester, and ran aft, in hopes that he could get another view of the men in the boat. He found, however, that the steamboat was proceeding so rapidly up the river, that he was fast losing sight of them; and then he concluded to go forward to the bows of the steamboat, thinking that, perhaps, there might be other logs coming down the river, with men after them in boats.

When he reached the bows, Marco found the deck encumbered with cables and anchors, and heavy boxes of freight, which made it difficult for him to find his way to a good place for a view. He finally reached a place where, by standing upon an anchor, he could look over the bulwarks, and get a view of the expanse of water before him. It was smooth, and its glassy surface was bright with the reflection of the rays of the morning sun.

Marco admired the beauty of the river and of its banks, but he could see no boats, or even logs coming. He saw some large sand banks before him, which had been left bare by the efflux of the tide. He wished that the steamboat would stop, and let him land upon one of them. He also looked down over the bows, and admired the

graceful form and beautiful smoothness of the ripple, or rather wave, which was formed by the cutwater of the boat as it urged its way rapidly through the water. After gazing upon this for some time, Marco turned to go away in pursuit of Forester, when an occurrence took place, which being somewhat important in its consequences, the account of it must be deferred to the next chapter.

CHAPTER II.

THE LOST BUCKET.

As Marco was stepping down from the position which he had taken upon the anchor, his eye fell upon a small bucket, with a long rope tied to the handle, which he immediately recognised as one of those buckets which the sailors fit up in that way, in order to draw up water from alongside the ship.

"There's a bucket, now," said Marco to himself. "I declare, I believe I'll draw up some water. Forester said that it was hard, but I think it will be easy. I 'll draw up a bucket full, and carry to him and show him."

So saying, Marco took up the bucket, lifted it gently over the side, and let it down slowly by the rope into the water. There was a knot in the end of the rope; and Marco held the knot firmly in his hand, so as to draw up the bucket by means of it, as soon as he should get it full. He found, however, that, although he could let the pail down easily enough, it was no easy matter to dip up any water into it; for the rope, being fastened to the bail or handle, kept the handle, and

of course the open part of the pail, upwards, so that the water could not run in. If Marco let the rope down more, the pail, being light, would not sink, but skipped along upon the surface of the water, drawn by the motion of the steamboat.

While Marco was making these fruitless attempts, another boy, dressed in sailor's clothes, whom Marco had seen several times before about the boat, came up to him, and asked him what he was doing.

"I 'm trying to get some water," said Marco.

"That is n't the way to get it," said the sailor boy. "Let me have the bucket. I 'll show you the way."

"No," said Marco, "I want to get it myself."

"You never can get any that way," said the boy. "You must swing it back and forth, and when it is swinging well, let it drop suddenly and catch the water."

So Marco began to swing the bucket back and forth, and after he had got it well a swinging, he let down the rope suddenly, at the moment when the bucket was at the extent of its oscillation. The bucket filled instantly; but, as the boat was advancing rapidly, it was caught by the water with such force that the rope was twitched out of Marco's hand with great force.

"Hold on!" exclaimed the sailor boy.

But it was too late. The rope fell down into the water, and the bucket, rope and all, sailed back upon the surface of the water, until they floated

under the paddle wheel of the boat, which dashed them down beneath the surface of the water, and they disappeared finally from view.

"Why did not you hold on?" said the boy.

Marco was silent.

The boy looked round to see if anybody had observed what had taken place. He found that all the seamen were busy here and there, and that nobody had noticed what the two boys had been doing.

"Nobody has seen you," said the sailor boy; "so you say nothing, and I 'll say nothing."

"But suppose they ask you what has become of that bucket," said Marco; "what will you tell them?"

"Oh, I 'll tell them I don't know where it is," he replied; "and I don't. I am sure I don't know where it is now: do you? Hush, here comes Joe."

Marco looked up at these words, and saw the sailor approaching whom the boy called Joe; and the boy himself immediately stepped down from the anchor, where he and Marco had been standing, and began coiling a rope upon the deck. Marco walked sorrowfully away towards the stern of the vessel, where he had left Forester.

There was something wrong and something right in the boy's proposal to Marco, to conceal the loss of the bucket. His object was to befriend and help Marco in his distress. This was right. The means by which he proposed to accomplish the object were secrecy and fraud. This was wrong. Thus, the end which he had in view

was a good one, and it evinced a good feeling in him; but the means for promoting it were criminal. Some persons have maintained that if the end is only right, it is of no consequence by what means we seek to promote it. Hence, they have had this maxim, viz., "The end sanctifies the means." But this maxim is not sound. The contrary principle is correct. It is sometimes expressed by this saying: "We must not do evil that good may come;" which is a much safer proverb to be guided by.

Marco's first impulse was, to go at once and tell the captain of the steamboat that he had lost his bucket. But he did not know exactly where he could find him. He looked at his office window, and found that it was shut. He asked one of the waiters, whom he met coming up stairs from the cabin, if he knew where the captain was. But the waiter did not know. Presently, he saw a gentleman walking back and forth upon that part of the deck which is in front of the door of the ladies' cabin. He thought that he was the captain. Marco walked up to him, and accosted him by saying:

"Are you the captain of this boat, sir?"

"Am I the captain?" asked the man. "Why? What do you want to know for?"

"Because, if you are," said Marco, "I have lost your bucket."

"Lost my bucket!" repeated the gentleman. "How did you lose it?"

"I lost it overboard," said Marco.

Here the gentleman laughed, and said, "No, I'm not captain; but you seem to be an honest sort of boy. I don't know where the captain is."

All this, though it has taken some time to describe it, took place in a very few minutes; and the boat had now advanced only so far as to be opposite the steam mill which Marco had seen just before he had left Forester. Marco happened to see the mill as the boat moved by it, and he went immediately to the side of the boat to get a better view of it.

There was a chimney for the smoke, and a pipe for the waste steam, at the mill. From the steam-pipe there issued a dense column of vapor, which came up, however, not in a regular current, like the smoke from the chimney, but it was puffed up in regular strokes, making a sort of pulsation. While Marco was looking at it, Forester came along, and stood looking at it too. There were a great many logs lying about the shore, and enormous piles of boards, which had been sawed, and which were ready for the vessels that were to come and take them away.

"What makes the steam come up in puffs?" asked Marco.

"Because, it is what they call a high pressure engine," said Forester. "It works against the pressure of the atmosphere. All such engines throw out the steam in puffs."

"Why do they?" asked Marco.

"Do you know what the cylinder of a steam engine is?" said Forester.

"Not exactly; I don't remember it very well," replied Marco.

"Come with me, then," said Forester, "and I will show it to you."

So saying, he took Marco to the engine of the boat, and showed him, in the midst of the machinery, a large iron vessel, shaped like a hogshead, only it had straight sides. Marco could not see much more than the top of it.

"That is the cylinder," said Forester. "It is the *heart* of the steam engine, as I may say—the seat of its power. All the other machinery is only to aid the cylinder, and to convey the power to the point where it is wanted to do the work. Thus, the place where the steam exerts its power, and on which the whole movement of the machinery depends, is the cylinder."

Marco observed that a long iron rod, large and solid, and very bright, kept ascending and descending through the top of the cylinder, as if pushed up and drawn down again by some force within. Forester told him that that was the piston rod.

"The piston rod," said Forester, "is fastened, at its lower end, to the *piston*, which is a flat plate of iron, made to fit the inside of the cylinder exactly."

"First," said Forester, "the steam comes in below the piston, and drives it up; and then it is

stopped from coming in below, and is forced in above, and so drives it down."

"And how does the other steam get out?" asked Marco.

"There are two ways of getting rid of the steam that is below the piston when the piston is coming down," said Forester. "One way is, to open a passage to let it out *into the air*. On this plan, when the piston has been driven up, the steam is cut off from coming in below the piston, and is admitted above. At the same instant, the passage is opened to let the lower steam out. Of course, the steam that comes in *above*, drives the piston down, and forces the steam that is *below*, out into the air. They generally have a pipe to convey it away, and as the piston goes up and down, the steam comes out in puffs, as you saw it in that mill."

"Yes," said Marco, "I understand that; and now what is the other way?"

"That kind of engine is called a *high pressure* engine," said Forester, "because the piston, in coming down, has to drive out the steam from below, against the pressure of the atmosphere; for the atmosphere above passes into the pipe, and resists the movement of the steam in coming out. It requires a greater force of steam to work the piston on this plan than in does upon the other."

"What is the plan of the other?" asked Marco.

"On the other plan," said Forester, "the steam under the piston is condensed, that is, turned suddenly into water; and this leaves a vacancy or void below the piston, so that the piston can be forced down much more easily than if it had to drive the steam out before it, against the pressure of the atmosphere."

Forester was going on to explain to Marco how it was that the steam was condensed in the cylinder, when the conversation was suddenly interrupted by the sound of the engine bell, which was the signal for the engine to stop. The thumping sound of the machinery and of the paddle wheels accordingly ceased, and the boat began to move more slowly. Presently, the bell sounded once more, and the piston rod slowly rose out of the cylinder, and then slowly descended again.

"They are going very slowly," said Marco.

"Yes," replied Forester, "the water is low, and I suppose that the channel is narrow."

Just at this moment, they perceived a strange sensation, as if the steamboat had been suddenly pushed backwards. Marco was startled. He did not know what it meant.

"There we are," said Forester.

"What?" said Marco. "What is it?"

"Aground," said Forester.

"Aground?" repeated Marco.

"Yes," said Forester; "that's the sensation produced when a ship goes aground upon sand or soft mud."

So saying, Forester left the engine, and went up to the upper deck, followed by Marco. There were several persons there, looking out upon the water.

"Yes," said Forester, "we are aground. You see by the trees upon the bank that we are not moving."

Marco saw that they were at rest. He asked Forester what they were going to do.

Just at this moment the little bell sounded, and the engine, which had been stopped when the boat went aground, was put in motion again.

"They are going to back the engine, I suppose," said Forester, "to try to draw her off."

But the boat would not move. The engine did not seem to have power to release her from her confinement.

"What shall we do now?" asked Marco.

"Why, whenever a ship is aground," said Forester, "the first question is, what is the state of the tide?"

"Because," continued Forester, after a moment's pause, "if the tide is *rising*, it soon lifts the vessel off, and enables her to go back, or, perhaps, forward, if the water is not very shallow. But, if the tide is *falling*, it leaves her to rest more and more upon the sand, and she cannot get off until the water has gone entirely down, and then rises again. She cannot get off, in fact, until the water has risen higher than it was when she first grounded."

"And how is it now?" asked Marco.

"I presume the tide is going down," said Forester; "and if so, we must wait here until it rises again." So saying, he began to look about for somebody of whom he could inquire. He soon heard a gentleman say to another that the tide was falling, and that they should have to stay here three hours.

"That 's rather provoking," said Marco.

"Oh, no," said Forester. "Perhaps we can go ashore."

"Well," said Marco, with an expression of gratification at the proposal.

"And perhaps we can borrow some fishing lines, and go a fishing."

"Yes," said Marco, "that will be an excellent plan."

"At any rate," said Forester, "when accidents of this sort occur upon our travels, we should not allow ourselves to be provoked by them, but make ourselves contented by the best means within our reach."

At this time, they began to hear the loud, hissing sound, produced by the blowing off of the steam from the engine, which Forester said was an additional indication that they were going to remain there for some time. Presently, a man came up the stairs from the deck below—for Forester and Marco were at this time on the upper deck—and told the passengers that the boat would have to remain there three or four hours, and that if any

of them wished to go ashore to amuse themselves, he would send them in his boat, after breakfast.

Quite a number of the passengers seemed disposed to accept this offer, and the boat was accordingly lowered; and Joe, with two other sailors, were despatched to row it ashore. They were all safely landed upon a raft of logs, just above the mill.

CHAPTER III.

A RAFT.

Forester and Marco did not take breakfast on board the steamboat, but waited until they got on shore. They had inquired of a fellow-passenger, who seemed acquainted with the country, and were told that there was a very good tavern about a quarter of a mile from the mill.

When they landed upon the logs, Marco, whose curiosity seemed to be stronger than his appetite, wanted to ramble about for a little time along the shore and among the piles of boards, but Forester thought it would be best first to go and get their breakfast.

"Because," said he, "we can then amuse ourselves by rambling about here, and shall be ready to return to the steamboat whenever they send for us."

So they went to the tavern.

Forester seemed to have little appetite for his breakfast. He complained of feeling fatigued, and yet he had nothing to fatigue him. Marco ate, and talked fast all the time; but Forester seemed silent and dejected.

"Come, cousin Forester, what is the matter with you?" said Marco at last.

Forester said that he felt somewhat unwell, and as there was a sofa in the room, he concluded to lie down upon it, and not go out. Marco was, at first, disposed to stay and take care of him, but Forester said that he did not need anything, and he wished Marco to go out and amuse himself.

"You may go and see the mill," said he, "and the logs along the shore; only be careful not to go where there is any danger; and come and let me know when the boat is coming from the steamer to take us on board again."

So Marco left Forester upon the sofa, and went away. He was sorry that he was sick, and he was particularly sorry that he had to go himself without company. But, concluding that he would adopt Forester's principle of making the best of everything, in the events which occur in travelling, he walked along the road, singing a tune which he had learned at a juvenile singing school in New York, and watching the pulsations of the steam, as it issued from the pipe at the mill.

As Marco walked along, it occurred to him that he had not, after all, succeeded in acknowledging to the captain of the steamboat that he had lost the bucket. And, since the first occasion for doing so had gone by, he began to doubt whether it would be best for him to trouble himself any farther about it.

"The bucket was not worth much," said he to

himself. "Nobody knows it is lost, except that boy, and he will not tell. I've a great mind not to say anything about it."

In fact, Marco found that he was much less inclined to make his acknowledgment now, than he was when the circumstance first occurred. He wished that he had at once stated the facts to Forester, which would have been his wisest course; but now, that the first occasion for doing so had passed away, he began to feel disinclined to do it at all.

Marco soon reached the mill, and he amused himself, for half an hour, in watching the movement of the engine, the strokes of the saw, and the drawing up of the logs from the water to the floor of the mill. There was a steep, sloping platform from the mill down to the river, and a long chain extended down to the water. This chain was fastened to one end of one of the logs, which lay floating there, and then, by means of the machinery, it was drawn slowly up, bringing the ponderous log with it.

The way in which the machinery drew up the chain was this: The end of the chain, which was within the mill, was wound around an axle, which was made to revolve by the machinery. The axle, thus revolving, wound up the chain, and, in this manner, drew it gradually in, by which means the log, which was attached to the lower end of it, was drawn up.

Presently, Marco's attention was attracted to-

wards some men, who seemed to be sailing about upon some logs, in a cove, just below the mill. He went down immediately to see what they were doing. They had long poles in their hands, with iron points in the ends of them, and were pushing the logs about with these poles, to choose out such as they wished to saw in the mill.

Just as Marco came down, one of the men stepped upon the end of a log which was floating very near him. The log sank a little, but not much, under him, and the man walked along towards the other end of it. Marco wondered how he could keep his balance.

When the millman reached the farther end of the log, he extended his long pole very dexterously, and struck the point of it into the corner of a sort of wharf, which was built upon the bank; and then, pulling gently, he drew himself along, together with the log upon which he was floating. Marco was surprised at this, and he wondered that the man did not fall off the log. He thought that if the log were to roll in the least degree, the man would be rolled off into the water. He ran down to the little wharf, so that he could see better.

"Well, my boy," said the millman, "do you belong on board the steamboat?"

"Yes, sir," said Marco; "we got aground. You 'll fall off of that log if you don't take care."

"No," said the millman, "there's no danger."

"Why, if the log should roll the least atom,

away you'd go," said Marco, "though the water is not very deep."

Here the man began to step upon the log in a peculiar manner, so as to make it roll. It rolled slowly, but the man continued stepping until he had rolled it completely over. The side which had been under water appeared of a dark color, and was very slippery, being covered with a sort of slime; but the man did not slip. After he had thus rolled the log completely over, he looked up to Marco, and said,

"There, you see that there is no danger."

When the man had drawn this log up to the shore, he went for another; and he had to sail upon this second one a long distance, in bringing it to its place. He pushed himself along by running his pole down to the bottom, and pushing against the sand.

"Could I sail upon a log?" asked Marco.

"No," replied the millman; "you'd roll off."

"How did you learn to do it?" asked Marco.

"Oh, I learned when I was a boy," replied the millman.

"Did you roll off when you were learning?" asked Marco.

"Yes," said the man. "I've been off the log into the water many a time."

"And how did you get out again?" said Marco.

"Oh, I could swim," he replied; "and as soon

as I came up, I would paddle back to the log, and climb up upon it. Once, however, I came very near being drowned."

"How was it?" said Marco.

"Why, I was on the upper side of a boom"——

"A boom?" said Marco, "what is that?"

"A boom!" repeated the millman; "don't you know what a boom is? It is a place to catch logs. They go to some cove or eddy, where the water is pretty still, and chain logs together, end to end, so as to form a long line on the lower side of the eddy, and then along up the middle of the river a little way, so as to enclose a space to catch the logs."

"What do they fasten the boom to?" asked Marco.

"Why, the lower end," said the millman, "is fastened to the shore, by means of a very strong post, or an iron staple set into the rocks. The other end, which is out in the middle of the stream, is fastened to some island, if there is one, or, if not, to a pier built up from the bottom."

"Well," said Marco, "tell on about your getting in."

"The boom was full of logs, and I was upon the upper side of it, at work with some other men. I was on a log trying to find the mark, and I fell in."

"What made you fall off?" asked Marco.

"I don't know," replied the millman. "I was not much use to logs then. I was trying to find the mark."

"What mark?" asked Marco.

"The owner's mark," said the millman. "The owners all mark their logs, when they get them out in the winter, and then we separate or sort them in the booms. Sometimes the mark is on the under side of the log, and so we have to turn it over in the water to find it."

While all this conversation had been going on, the millman had been moving about over the water with the various logs, Marco accompanying him, and keeping as near to him as possible, walking along the shore, and sometimes on the logs which were resting by one end on the shore. As the millman was describing the system of marking the logs, he was sailing along very near to Marco, and he immediately began to turn the log over under him, saying—

"For instance, look here, and see me turn up the mark of this log."

Marco watched the log, as it slowly revolved, until presently there came a sort of hieroglyphical mark upon one end, made by crosses and lines cut into the wood.

"Every owner has his particular mark," said the millman.

"Whose mark is that?" asked Marco.

"I don't know," said the man, "but they know at the mill. They have a register of them all at the mill."

"I wish I could turn over a log, standing on it, in that way," said Marco.

"You couldn't," said the millman. "The only way by which you can sail safely on logs, would be to put two together, and make a sort of raft."

"How?" asked Marco.

"By nailing short pieces of boards across from one log to another. Then they would not roll."

"Well," said Marco, "if I could only get a hammer and some nails."

The millman told him that perhaps they would let him have a hammer and some nails at the mill; and Marco, accordingly, went up to inquire. They told him they had a hammer, but they had no nails to spare. So Marco failed of getting the means of making a raft. He forgot to go back to the millman to get the rest of his story, but, instead of it, he rambled down the bank of the river, until he came to a place where there was an old fence, which had fallen down, and the nails were sticking out of the boards. He now wished that he had borrowed the hammer at the mill, and he tried to persuade a boy, who was standing there, to go and borrow it for him.

The boy told him that a stone would do very well for a hammer.

"So it will," said Marco; "find me a good one, and bring it to this old fence."

The boy brought Marco a stone, and Marco began to knock out the nails. Very soon, however, he set the boy at work upon the nails, while he went in pursuit of some short boards, to nail across from one log to the other. He found some, which

he thought would answer, without much difficulty, and collected them together near the logs; and, soon afterwards, the boy brought him the nails.

The logs were lying side by side, with two ends resting upon the shore, the two other ends being out towards the stream. Marco concluded to nail first the two ends which were towards the shore, they being nearest, and being also more steady than the others. He accordingly laid one of his short pieces across, and nailed it as well as he could, using the stone for a hammer.

"Now," said he to the boy, "I'll put another board across at the middle, and one more at the other end, and then, if I can find something for a pole, I'll take a little sail. Look about a little, my boy, won't you," continued he, "and see if you can't find a pole, while I am nailing the other boards."

The boy accordingly went away in pursuit of a pole, while Marco nailed first the middle board, and then the end one. He came back just after Marco had got the first nail of the end board driven in, and as soon as he came in sight of the logs and of Marco, he exclaimed—

"You're adrift! you're adrift!"

Marco got up immediately, and looked around. He was indeed adrift. His weight, pressing upon the outer ends of the logs, had lifted the other ends off the shore, and the raft was slowly floating up the stream. The reason why it floated *up* was, that there was at this place what they call an

eddy, which is a current near the shore, flowing up the stream. Such eddies are caused, generally, by curves in the banks.

As soon as Marco perceived that he was afloat, he said—

"Throw me the pole."

The boy threw the pole, and it just reached the raft. Marco took it in, and, thrusting the end hastily down into the water, he endeavored to push himself back by pushing against the bottom. But it was too late. He had got already into such deep water that he could scarcely reach the bottom, and he could not push the raft back.

In the mean time, the raft slowly moved up the river.

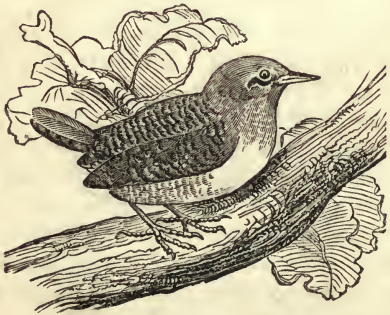
"Never mind," said Marco. "I'm going right for the mill, and when I get there, they'll come out for me in a boat. In the mean time, I'd better finish my raft."

So saying, he kneeled down and finished nailing on the last board. When he rose again, he found that he had advanced considerably, and the boy had accompanied him, walking along by the shore. He perceived, however, that he was gradually getting away from the shore, and, looking forward, he saw, to his consternation, that the eddy did not extend to the mill; but that, at a short distance above him, it swept out into the main current of the river, which was running by a point of land at the upper part of the eddy, with great speed. The raft advanced slowly till it

came to this current, when it turned around, and began to glide swiftly down the stream.

"Boy," cried Marco, in great distress, "run to the mill as fast as you can go, and tell them that I have gone down the river, adrift. Tell them to send a boat after me as quick as they can. My cousin Forester will pay them well."

So the boy ran off towards the mill, while Marco floated away helplessly down the current.



CHAPTER IV.

THE DESERT ISLAND.

After Marco had sailed on for a few minutes, he cast his eyes up the river, and saw the steamboat. She was still lying in an inclined position, as she had been left grounded by the tide. He shouted and waved his hat, in the endeavor to attract the attention of the people on board, and lead them to send a boat to rescue him. But all his efforts were vain. He could not make them hear.

The current soon bore him beyond a point of land which hid the steamboat from his view, and he began to fear that he should be actually carried out to sea. He was calculating, in fact, how many miles it was to the mouth of the river, when it suddenly occurred to him that, though he could not *push* with his pole, he might perhaps *paddle* with it. He accordingly took up the pole, which he had laid down upon the raft, and began to use it as a paddle.

Marco found, to his great relief, that he could produce considerable effect upon his raft by using his pole as a paddle. He contrived to get the head of his raft round towards the shore, and, by work-

ing hard, he succeeded in urging it along through the current, very slowly, indeed, but still perceptibly, so that he began to have some hope that he might succeed in reaching land.

Before he had made much progress, however, he suddenly saw before him, at a short distance, a little rocky island, with some grass and a few trees on the lower end of it. The island was very small, being not much longer than Marco's raft. It lay almost directly in his course—so nearly, that he perceived that by working a little more with his pole, he thought he could bring himself into such a position as to be thrown by the current directly upon it.

This he did. He paddled, with all his strength, to get into a line with the upper end of the island, the current, all the time, bearing him down directly towards it. In a few minutes, he had the satisfaction of seeing that he was going directly upon it.

"All right," said he to himself; "now I'm safe."

As he said these words, the end of the raft struck the rock, and he leaped off upon it. The raft swung round, and was going away, but Marco seized it, and dragged it up a little way upon the shore, so as to secure it. He then sat down upon the rock, and began to consider what was next to be done.

He was certainly at a loss to know what was to be done. He waited an hour, and then, getting

very tired of his situation, he began to consider whether it would not be best for him to entrust himself once more to his raft, and endeavor to get to the shore by means of his paddle.

While he was sitting on a point of the rock, in this perplexity, looking towards the shore that was nearest to him, he suddenly saw a boy coming upon a horse, along a winding road, which led to the river. He was driving the horse down to water. The horse advanced to the brink of the river, when Marco began to call out in his loudest voice,

"Halloo!"

"Halloo!" answered the boy.

"Can't you get a boat, and come and take me off this island?" cried Marco.

The boy paused a moment, and gazed earnestly at Marco, while the horse continued drinking.

"How came you on that island?" said the boy, calling out again in a loud voice.

"I got adrift on some logs," said Marco, "and floated down the river. Can't you get a boat, and come and take me off?"

"I have not got any boat," said the boy. "There an't any boats about here."

"I wish you would go and get one," said Marco. "I'll pay you well for it."

The boy did not answer. He seemed to be hesitating. In the mean time, the horse, having nearly finished his drinking, lifted up his head and looked at Marco.

"There is not any boat within a mile," said the boy. "But I should think you might wade ashore. The water is not deep between here and the island."

"Then wade out here with your horse," said Marco, "and take me on behind you."

The boy hesitated a moment, but he finally decided to comply with Marco's proposal, and accordingly began to advance his horse into the water. Marco watched his progress with intense interest. As the water grew deeper, he began to fear that the boy would get discouraged, and turn back. But the boy kept on. He turned his steps somewhat below the island, where there was an extensive shoal; the water grew shallower and shallower, until at last the horse emerged entirely, and stood upon a little dry sand bank at the lower side of the island.

"I'm very much obliged to you, indeed," said Marco, "for coming for me—besides the pay. I will pay you for it as soon as we get on shore."

"Oh, no," said the boy, "I don't need any pay just for wading my horse out here. I wade him out here very often, when I come down to water; that is, in the summer, when the water is low."

Marco mounted behind the boy, and the boy turned his horse's head towards the shore.

"How far is it back to the mill?" asked Marco.

"To the steam mill?—four miles," answered the boy.

"Four miles!" exclaimed Marco; "is it possi-

ble that I have floated down four miles? How shall I ever get back again?"

"How did you happen to get adrift?" asked the boy.

Marco proceeded to give the boy an account of his getting adrift, but in a short time the water began to grow so deep that he was afraid. The boy, however, told him that there was no danger. The bottom of the river, at this place, was a great bed of pebble stones, and the current ran very swiftly over them, and curled in sharp ripples about the horse's legs. Presently, however, the water became more shallow, and they soon safely reached the shore.

"Now," said Marco, "I want to get back to the mill just as quick as I can—before the steamboat goes."

"The steamboat?" said the boy, "she has gone long ago. She went by early this morning."

"Yes," said Marco, "she went by here, but she got stopped."

So Marco told the boy the story of their having got aground, and of his going ashore; and of all his adventures, in fact, down to the time of his being cast upon the desert island. The boy told him that he had better make haste; "for," said he, "the tide has risen a great deal already. When the tide is at the lowest, we can go out to that island almost on bare ground."

"But I can't walk back four miles," said Marco. "Could you not carry me in a wagon?" he continued.

"We have got a wagon," said the boy, "if my father will let me go."

"Let us go right up and ask him," said Marco.

They accordingly began to advance up the road, the boy putting his horse to a rapid trot. Marco, who was not accustomed to riding in this style—behind another boy, and without a saddle—was much jolted, and, in fact, he found it very difficult to keep his seat. He began to feel so much anxiety, however, about getting back again, that he did not complain. In a short time, the boy reached the house. It was a small, plain farm-house. There was a shed at one side of it, with a wagon standing in the shed—the shafts resting upon a wood-pile.

"My father is not at home, now," said the boy, "but he will be at home very soon."

"Oh, don't let us wait for him," rejoined Marco. "He'll be willing to have you go, I know."

"No," said the boy, "I should not dare to go without his leave."

"Let us harness the horse into the wagon, then, at any rate," said Marco, "and then we shall be all ready."

"We can do that," said the boy.

So they harnessed the horse into the wagon, and the boy led the horse around to the door. Marco, who was quite impatient to go, got into the wagon, and sat waiting. The man came in about twenty minutes, and when he heard a statement of the case, he said that his boy might go and take Marco back to the mill.

It was now so late that Marco began to be seriously afraid that the steamboat might have gone. He was very impatient to have the horse go as fast as possible; and he watched at every turn in the road which gave him a view of the river, hoping to get a glimpse at the boat. He wondered whether Forester was still at the tavern, or whether he had come out in pursuit of him. After wearying himself with conjectures, which were all in vain, he suddenly came to a view of the river opposite the mill. The steamboat, to his great joy, was in its place; but there was a black column of smoke issuing from the smoke-pipe.

"They are firing up," said Marco, "I verily believe."

"What do you mean by that?" said the boy.

"Why, building up the fires," said Marco, "to set the engine a-going. They call it firing up."

Just at this moment there broke forth a loud and hoarse hissing from the steam-pipe, and a dense column of white vapor began to ascend, which mingled its snowy volumes, in a beautiful manner, with the dark masses of the smoke.

"They are blowing off the steam," said Marco.

"What does that mean?" asked the boy.

"Why, that they have got the steam up, and are letting off a little of it, while they are waiting for something. Perhaps they are waiting for us. Drive on as fast as you can."

A moment after this, the sound of the steam

suddenly ceased, and the great paddle wheels, on the sides of the boat, began slowly to revolve.

"They are trying to get her off," said Marco. "I *do hope* they can't start her. Drive on; drive on as fast as you can."

They were, at this time, upon the top of a hill which commanded a fine view of the river, and of the scenery upon its banks. The mill was before them, too, in full view. But Marco was too much engaged in watching the movements of the boat to regard the scenery. The boy drove rapidly down the hill. They reached the mill in a very few minutes, and drove down to the bank of the river, by a road which led to the water, a short distance above the mill. But, in the mean time, unfortunately for Marco, the steamboat had regained its liberty, and when Marco and the boy came in view of it again, as their horse stopped at the edge of the water, they saw, to Marco's dismay, that she was ploughing her way swiftly up the river, being just about to disappear behind a point of land which terminated the view of the water in that direction.

"They are gone," said Marco, in a tone of despair, "they are gone; and what shall I do?"

"Can't you go in the stage?" asked the boy, hoping thus to say a word of encouragement and consolation.

"No," said Marco, "I don't believe there is any stage from this old mill. Besides, I don't know

where to go. I should not have thought that Forester would have gone off and left me."

"Was he on board the steamboat?" asked the boy.

"Yes," said Marco—"that is, he was to go on board—but I left him at the tavern."

"Perhaps he is there now," said the boy. "Let us go and see."

Marco approved of this plan, and they turned the wagon, and rode towards the tavern. As soon as the horse stopped in the yard, Marco leaped out of the wagon, and ran in. He found Forester reclining upon the sofa, where Marco had left him, asleep.

Marco advanced towards him, and took him by the shoulder, roughly, to wake him up, saying,

"Forester! cousin Forester! wake up! the boat has gone."

Forester opened his eyes—looked wildly at Marco, and then put his hands to his head, pressing his temples with the palms, but he did not speak.

"The boat has gone, cousin Forester," continued Marco.

"Then what good does it do to wake me up so roughly?" asked Forester.

"Why—I—thought you 'd want to know it," said Marco; "but why did not you come down?"

"Because," said Forester, "you were to come and tell me, I thought, when they were ready to go."

Marco had no reply to make to this suggestion, and he was silent. He found, afterwards, on farther conversation with Forester, that he was quite unwell. His head ached, and his face was flushed, as if he was feverish. Marco related to Forester an account of his adventures on the raft of logs. Forester thought that he had had a very narrow escape.

Marco expected that Forester would have rebuked him very sharply for his fault in going upon the logs at all. But he did not. After Marco had got through with his account, Forester only said,

"Well, Marco, you evidently did wrong in getting upon the logs at all; but the evil consequences to you will be punishment enough, and, in fact, more than enough."

"Evil consequences?" said Marco—"no; there are no evil consequences, only that we have got left behind."

"I don't regard that," said Forester, "for I am too unwell to travel to-day; but then you have suffered considerable pain and anxiety already, and, besides, there will be some money to pay."

"What for?" said Marco.

"Why, you have got to pay the boy for bringing you home," replied Forester.

"Must I pay him," said Marco, "out of my own money?"

"Who do you think ought to pay him?" said Forester.

"Why, *I* ought to, I suppose," said Marco.

"But it won't be much. I think a quarter of a dollar will be enough."

"Then, did not you say that you sent to the mill to have somebody go down after you in a boat?" asked Forester.

"Yes," said Marco, "but I don't think they went."

"You had better go to the mill and see," said Forester.

So Marco went out and paid the boy a quarter of a dollar, with which he seemed to be satisfied. Then he went to the mill, and he found two men just returning, in a boat, from a long pull down the river in pursuit of him. Marco paid them half a dollar. Thus his loss was three quarters of a dollar.

When he returned to the tavern, he found that Forester had taken some medicine, and had gone to bed. Forester told him that he must amuse himself the best way he could, and that, after the experience that he had had that day, he hoped he would be careful not to put himself any more into dangerous situations.

CHAPTER V.

THE BENEFIT OF THE DOUBT.

Marco took dinner that day at the tavern alone, and, after dinner, he carried a cup of tea to Forester,—but Forester was asleep, and so he did not disturb him.

In the afternoon he went out to play. He amused himself, for half an hour, in rambling about the tavern yards and in the stables. There was a ferocious-looking bull in one of the yards, chained to a post, by means of a ring through his nose. Marco looked at the bull a few minutes with great interest, and then began to look about for a long stick, or a pole, to poke him a little, through the fence, to see if he could not make him roar, when, instead of a pole, his eye fell upon a boy, who was at work, digging in a corner of a field near, behind the barn.

The boy's name was Jeremiah. He was digging for worms for bait. He was going a fishing. Marco determined to go with him.

Jeremiah furnished Marco with a hook and a piece of sheet lead to make a sinker of, and Marco had some twine in his pocket already; so that he

was soon fitted with a line. But he had no pole. Jeremiah said that he could cut one, on his way down to the river, as they would pass through a piece of woods which had plenty of tall and slender young trees in it.

He succeeded in getting a pole in this manner, which answered very well; and then he and Jeremiah went down to the river. They stood upon a log on the shore, and caught several small fishes, but they got none of much value, for nearly half an hour. At last, Jeremiah, who was standing at a little distance from Marco, suddenly exclaimed:

"Oh, here comes a monstrous great perch. He is coming directly towards my hook."

"Where? where?" exclaimed Marco. And Marco immediately drew out his hook from the place where he had been fishing, and walked along to the log on which Jeremiah was standing.

"Where is he?" said Marco, looking eagerly into the water.

"Hush!" said Jeremiah; "don't say a word. There he is, swimming along towards my hook."

"Yes," said Marco, "I see him. Now he's turning away a little. Let me put my line in, too."

Marco extended his pole and dropped his hook gently into the water. He let it down until it was near the perch. The poor fish, after loitering about a minute, gradually approached Marco's hook and bit at it.

Jeremiah, seeing that he was in danger of losing his fish, now called out to Marco to take his line out. "It is not fair," said he, "for you to come and take my fish, just as he was going to bite at my hook. Go away."

But it was too late. As Jeremiah was saying these words, the fish bit, and Marco, drawing up the line, found the fish upon the end of it. As the line came in, however, Jeremiah reached out his hand to seize the fish, and Marco, to prevent him, dropped the pole and endeavored to seize it too.

"Let go my fish," said Jeremiah.

"Let alone my line," said Marco.

Neither would let go. A struggle ensued, and Marco and Jeremiah, in the midst of it, fell off into the water. The water was not very deep, and they soon clambered up upon the log again, but the fish, which had been pulled off the line in the contention, fell into the water, and swam swiftly away into the deep and dark parts of the water, and was seen no more. He was saved by the quarrels of his enemies.

Marco, who was not so much accustomed to a wetting as Jeremiah was, became very angry, and immediately set off to go home to the tavern. Jeremiah coolly resumed his position on the log, and went to fishing again, paying no heed to Marco's expressions of resentment.

Marco walked along, very uncomfortable both in body and mind. His clothes were wet and muddy, and the water in his shoes made a chuck-

ling sound at every step, until he stopped and took his shoes off, and poured the water out. It was nearly sunset when he reached the tavern. He found Forester better. He had left his bed, and had come down into the parlor. He was reclining on the sofa, reading a book, when Marco came in.

Marco advanced towards him, and began to make bitter complaints against Jeremiah. In giving an account of the affair, he omitted all that part of the transaction which made against himself. He said nothing, for instance, about his coming to put his line in where Jeremiah was fishing, and while a fish was actually near Jeremiah's hook, but only said that he caught a fish, and that Jeremiah came and took it away.

"But what claim had Jeremiah to the fish?" asked Forester.

"He had no claim at all," said Marco.

"You mean, he had no *right* at all," said Forester.

"Yes," said Marco.

"He had a *claim*, certainly," rejoined Forester; "that is, he claimed the fish. He *pretended* that it was his. Now, on what was this claim or pretence founded?"

"I don't know," said Marco, "I am sure. I only know he had no right to it, for I caught the fish myself, and he was going to take it away."

Forester paused a moment, and then resumed:

"I don't think that you have given me a full and fair account of the transaction; for I cannot believe

that Jeremiah would have come and taken away the fish without any pretext whatever. You must have omitted some important part of the account, I think."

Marco then told Forester that Jeremiah said that the fish was just going to bite at his hook; and, after several other questions from Forester, he gradually acknowledged the whole truth. Still, he maintained that it was his fish. He had a right to put in his line, he said, wherever he pleased, whether another boy was fishing or not; the fish belonged to the one who caught him; and, before he was caught, he did not belong to anybody. It was absurd, he maintained, to suppose that the fish became Jeremiah's, just because he was swimming near his hook.

"Sometimes one can judge better of a case," said Forester, "by reversing the condition of the parties. Suppose that you had been fishing, and a large fish had come swimming about your hook, and that Jeremiah had then come to put his hook in at the same place, should you have thought it right?"

"Why, I don't know," said Marco.

"It is doubtful. Now, it is an excellent rule," continued Forester, "in all questions of right between ourselves and other persons, for us to give them *the benefit of the doubt*."

"What does that mean?" asked Marco.

"Why, if a man is tried in a court for any crime," replied Forester, "if it is clearly proved

that he is innocent, of course he goes free. If it is clearly proved that he is guilty, he is convicted. But if neither the one nor the other can be proved, that is, if it is doubtful whether he is innocent or guilty, they give him the benefit of the doubt, as they term it, and let him go free."

"I should think that, when it is doubtful," said Marco, "they ought to send him back to prison again till they can find out certainly."

"No," said Forester, "the jury are directed to acquit him, unless it is positively proved that he is guilty. So that, if they think it is doubtful, they give him the benefit of the doubt, and let him go free. Now, in all questions of property between ourselves and others, we should all be willing to give to others the benefit of the doubt, and then the disputes would be very easily settled, or rather, disputes would never arise. In this case, for instance, it is doubtful whether you had a right to come and interfere while the fish was near his hook; it is doubtful whether he did or did not have a sort of right to try to catch the fish, without your interfering; and you ought to have been willing to have given him the benefit of the doubt, and so have staid away, or have given up the fish to him after you had caught it."

"But I don't see," said Marco, "why he should not have been willing to have given me the benefit of the doubt, as well as I to have given it to him."

"Certainly," said Forester; "Jeremiah ought

to have considered that there was a doubt whether he was entitled to the fish or not, and to have been willing to have given you the benefit of the doubt; and so have let you kept the fish. Each, in such a case, ought to be willing to give up to the other."

"And then which of us should have it?" asked Marco.

"Why, it generally happens," said Forester, in reply, "that only one of the parties adopts this principle, and so he yields to the other; but if both adopt it, then there is sometimes a little discussion, each insisting on giving up to the other. But such a dispute is a friendly dispute, not a hostile one, and it is very easily settled."

"A friendly dispute!" exclaimed Marco; "I never heard of such a thing."

"Yes," said Forester. "Suppose, for instance, that, when you had caught your fish, you had said, 'There, Jeremiah, that fish is yours; he was coming up to your hook, and would have bitten at it if I had not put my line in;' and, then, if Jeremiah had said, 'No, it is not mine; it is yours, for you caught it with your hook;' this would have been a friendly dispute. It would have been very easily settled."

"I am sorry that I left my pole down at the river," said Marco. "I cut a most excellent pole in the woods, on my way down, and I left it there across the log. I mean to go down and get it early in the morning."

"No," said Forester; "we must be on our way up the river early to-morrow morning."

"How shall we go?" asked Marco.

"I have engaged a wagon here to take us to Bath, and there we shall find a stage."

Accordingly, early the next morning, Forester and Marco got into a wagon to go up the river to Bath, which is the first town of any considerable consequence which you meet in ascending the Kennebec river. Marco and Forester sat on the seat of the wagon, and a boy, who was going with them for the purpose of bringing the wagon back, sat behind, on a box, which had been put in to make a seat for him.

Marco said that he was very sorry that he had not time to go and get his fishing-pole.

"It would not do any good," said Forester, "for you could not carry it."

"Why, yes," said Marco, "we might put it on the bottom of the wagon, and let the end run out behind. It is pretty long."

"True," said Forester, "we might possibly get it to Bath, but what should we do with it then?"

"Why, then," said Marco, "we might put it on the top of the stage, I suppose. Would not they let us?"

"It would not be very convenient to carry a long fishing-pole, in that way, to Quebec," replied Forester, "through woods, too, half of the way, full of such poles. You might stop and get a cane

or staff, if we find a place where there are some good ones. A cane would be of some service to you in walking up the hills, and that could be taken along with our baggage easily."

Marco said that he should like this plan very much; and, as they rode along, they looked out carefully for a place where there were slender saplings growing, suitable for canes.

"What kind of wood would you have?" asked Forester.

"I don't know," replied Marco; "which kind is the best?"

"The different woods have different qualities," replied Forester. "Some are light and soft, which are good qualities for certain purposes. Some are hard. Some are stiff, and some flexible. Some are brittle, and others tough. For a cane, now, do we want a hard wood or a soft one?"

"Hard," said Marco.

"Why?" asked Forester.

"Oh, so that it shall not get indented or bruised easily," replied Marco.

"A light wood or a heavy one?" asked Forester.

"Light," replied Marco, "so that it will be easy to carry."

"Stiff or flexible?" asked Forester.

"Stiff," replied Marco.

"Yes," said Forester. "Some kinds of wood grow straight, and others crooked."

"We want it straight," said Marco.

"Yes," replied Forester. "The pine grows very straight. If we could find some young pines, they would make us some beautiful-looking canes."

"And how is it with the other qualities?" asked Marco.

"Pine is very light," said Forester.

"That is good," said Marco.

"And *soft*," said Forester.

"That is not so well," said Marco.

"And it is very weak and brittle."

"Then it will not do at all," said Marco. "I want a good strong cane."

Just at this time, they were ascending a hill, and, after passing over the summit of it, they came o a place where Forester said he saw, in the woods, a number of young oaks and beeches, which, he said, would make good canes. The oak, he said, was very strong, and hard, and tough; so was the beech.

"Only there are two objections to them for canes," said Forester, as they were getting out of the wagon; "they are not so light as the pine, and then, besides, they are apt to grow crooked. We must look about carefully to find some that are straight."

"Which is the most valuable of all the kinds of wood?" asked Marco.

"The question is ambiguous," said Forester.

"What do you mean by that?" asked Marco.

"I mean, that it has two significations," replied Forester; "that is, the word valuable has two significations. Pine is the most valuable in one sense; that is, pine is, on the whole, most useful to mankind. But there are other kinds of wood which are far more costly."

"I should not think that pine would be so valuable," said Marco, "it is so weak and brittle."

"It is valuable," said Forester, "because, for the purpose for which men want the greatest quantities of wood, strength is not required. For boarding the outsides of buildings, for example, and finishing them within, which uses, perhaps, consume more wood than all others put together, no great strength is required."

"I think people want more wood to *burn* than to build houses with," said Marco.

"Yes," said Forester, "perhaps they do. They do in this country, I think, but perhaps not in Europe and other old countries. But pine, although it has no great strength, is an excellent wood for building, it is so soft and easily worked."

Forester's remarks, upon the different kinds of wood, were here interrupted by Marco's finding what he considered an excellent stick for a cane. When he had cut it, however, he found that it was not so straight as it had appeared to be while growing.

However, after some time spent in the selection, Marco and Forester both procured excellent canes.

"This is good, hard wood," said Marco, as he was trimming his cane, and cutting it to a proper length.

"Yes," said Forester; "it is beech, and beech is very hard."

After finishing their canes, they took their seats in the wagon again.

CHAPTER VI.

EBONY AND PINE.

After riding along a short distance in silence, Marco introduced the subject of the different woods once more. He asked Forester which was the most *costly* of all the woods.

"Costly is not an ambiguous term," said Forester; "that means, which has the greatest *money* value."

"Yes," said Marco. "I suppose it is mahogany."

"O no," said Forester.

"Rose wood, then," said Marco. "It must be rose wood. My mother has a beautiful piano made of rose wood."

"No," said Forester. "Ebony is more costly than either rose wood or mahogany. They sell ebony by the pound."

"Where does ebony come from?" asked Marco.

"I don't know," replied Forester.

"I should like to know," said Marco. "How much do they sell it for, by the pound?"

"I don't know that, either," said Forester. "I know very little about it, only that it is a very costly wood, on account of some peculiar properties which it has, and its scarcity."

"What are the peculiar properties?" asked Marco.

"One is, its great hardness," said Forester. "It is very hard indeed. Another is, its color."

"What color is it?" asked Marco.

"Black," replied Forester,—"black as jet; at least, one kind is black as jet. There is a kind which is brown. It is called brown ebony."

"I don't think black is very pretty," said Marco.

"No," said Forester; "there does not seem to be much beauty in black, in itself considered; but then, for certain purposes, it is much handsomer than any other color would be; for a cane, for instance."

Marco looked at the beech cane which he had before him, and began to consider how it would look if it were black.

"I suppose I could paint my cane black," said he, after a moment's pause, "if you think it would be any better."

"No," said Forester; "I should prefer having it of its natural color. The bark of the beech has beautiful colors, if they are only brought out by a coat of varnish."

"Brought out?" repeated Marco.

"Yes," said Forester. "There is a kind of fine dust, or something like that, which dims the bark; but, when you put on oil or varnish, there is a sort of transparency given to the outside coating, which brings the natural color of the bark fully to view."

"Then I will get my cane varnished, when I get to Bath," said Marco.

"Ebony," said Forester, "is used a great deal where a contrast with ivory is wanted. Ebony is hard and fine-grained, like ivory, and it takes a high polish. So, whenever they want a contrast of black and white, they take ebony and ivory."

"When do they want a contrast between black and white?"

"One case," replied Forester, "is that of the keys of a piano forte. They want the short keys, which mark the semi-tones, of a different color from the others, so that the eye will catch them as quick as possible. So in a chess-board. They sometimes make chess-boards with alternate squares of ebony and ivory."

"I think it would be just as well to take common wood and paint it black," said Marco, "rather than pay so much money for ebony."

"No," said Forester, "that would not do so well. The paint would wear off; or, if it did not wear off by handling, still, if it got a little knock or hard rub, a part would come off, and that would show a little spot which would be of the natural color of the wood. This would look very badly."

"Then, besides, painted wood," continued Forester, "cannot be finished off so smoothly, and polished up so highly, as a wood which is black by nature. They have a way of *staining* wood, however, which is better than painting it."

"How is that done?" asked Marco.

"Why, they make a black stain," said Forester, "which they put upon the wood. This staining soaks in a little way, and blackens the fibres of the wood itself, beneath the surface. This, of course, will not wear off as easily as paint."

"I should not think it would wear off at all," said Marco.

"Yes," replied Forester, "for, if a cane is made of any wood stained black, after a time the wood itself wears away farther than the staining had penetrated. Then the fresh wood will come to view. So that, if you want anything black, it is much better to make it of a wood which is black all the way through.

"Besides," continued Forester, "ebony is a very hard wood, and it will bear knocks and rough usages much better than other kinds of wood which are softer. Once I made a carpenter an ebony wedge, to split his laths with."

"What are laths?" asked Marco.

"Laths are the thin split boards which are nailed upon the sides of a room before the plastering is put on. Sometimes laths are made very narrow, and are nailed on at a little distance from each other, so as to leave a crack between them. Then the plastering, being soft when it is put on, works into the cracks, and thus clings to the wood when it is dry and hard. If plastering was put on to smooth boards, or a smooth wall, it would all fall off again very easily."

"Yes," said Marco; "I have seen the plaster-

ing coming up through the cracks in the garret at your house in Vermont."

"The lath boards," continued Forester, "are sometimes made narrow, and nailed on at a little distance from each other, and sometimes they are wide boards, split up, but not taken apart, and then the cracks, which are made in splitting them, are forced open when the boards are nailed on. The way they do it, is this. They put the wide lath board down upon a plank, and make a great many cracks in it with an axe. Then they put it upon the wall, or ceiling, and nail one edge. Then they take a wedge and drive into one of the cracks, and force it open far enough to let the plastering in. Then they put in some more nails, in such a manner as to keep that crack open. Then they wedge open another crack, and nail again; and so on, until they have nailed on the whole board, so as to leave the cracks all open."

"And you made the carpenter an ebony wedge?" said Marco.

"Yes," said Forester. "He had had wedges made of the hardest wood that he could get, but they would soon become bruised, and battered, and worn out, with their hard rubbing against the sides of the cracks. At last, I told him I had a very hard kind of wood, and I gave him a piece of ebony. He made it into a wedge, and, after that, he had no more difficulty. He said his ebony wedge was just like iron."

"Was it really as hard as iron?" asked Marco.

"Oh, no," said Forester,—"but it was much harder than any wood which he could get. He thought it was a very curious wood. He had never seen any like it before."

"I should like some ebony," said Marco.

"Ebony would be an excellent wood to make a top of," said Forester, "it is so hard and heavy."

"I should like to have a top hard," said Marco, "but I don't think it would be any better for being heavy."

"Yes," said Forester; "the top would spin longer. The heavier a top is, the longer it will spin."

"Then I should like a top made of lead," said Marco.

"It would spin very long," said Forester, "if it was well made, though it would require more strength to set it a-going well. But lead would be soft, and thus would easily get bruised and indented. Besides, black would be a prettier color for a top than lead color. A jet black top, well polished, would be very handsome."

"Is black a color?" asked Marco. "I read in a book once that black and white were not colors."

"There are two meanings to the word color," said Forester. "In one sense, black is a color, and in another sense, it is not. For instance, if a lady were to go into a shop, and ask for some morocco shoes for a little child, and they were to show her some black ones, she might say she did not want

black ones; she wanted colored ones. In that sense, black would not be a color.

"On the other hand," continued Forester, "she might ask for silk stockings, and if the shopkeeper were to ask her what color she wanted, she might say black. In that sense, black would be a color."

"Which is the right sense?" asked Marco.

"Both are right," said Forester. "When a word is commonly used in two senses, both are correct. The philosophers generally consider black not to be a color; that is, they generally use the word in the first sense."

"Why?" asked Marco.

"For this reason," replied Forester. He was going on to explain the reason, when suddenly Marco's attention was attracted by the sight of a long raft of logs, which was coming down the river. They had been riding at some distance from the river, and out of sight of it, but now it came suddenly into view, just as this raft was passing by. There were two men on the raft.

"See those men on the raft," said Marco. "They are paddling."

"No," replied Forester; "they are sculling."

"Sculling?" repeated Marco.

"Yes," replied Forester. "They always scull a raft. It is a different motion from paddling."

Marco watched the men attentively, examining the motion which they made in sculling, and con-

sidering whether he might not have sculled his raft to the shore in the same manner.

"What straight logs!" said Marco.

"Yes," replied Forester; "the pine tree grows up tall and straight, and without branches, to a great height. This is the source of some of its most valuable properties. It makes the wood straight-grained. That is, the fibres run smooth and regularly, from one end of the stem to the other."

Just at this time, Forester saw a large pine tree growing alone, by the side of the road they were travelling. This solitary tree had a great many branches growing out from the stem, in every part, from the top to the bottom.

"That is because the tree grows by itself," said Forester, "in the open field. Those that grow in the forest do not throw out branches from the stem,

but they run up to a great height, with only a little tuft of branches on the top."

"I don't see why they don't have branches in the woods," said Marco.

"Because," replied Forester, "where trees grow close together, the light and the air is excluded from the lower parts of the stems, and so branches cannot grow there. Nothing can grow without light and air."

"I've seen monstrous long potato sprouts grow in a dark cellar," said Marco.

"Yes," said Forester; "so have I. I did not think of that. But they don't grow very well."

"They grow pretty long, sometimes," replied Marco.

"At any rate," said Forester, "the branches of trees will not grow from the stems of the trees near the ground, in the woods; and this is of great importance, for, whenever a branch grows out, it makes a knot, extending in to the very centre of the tree. This would injure a pine log very much, as the knot would show in all the boards, and a knot is a great injury to a pine board, though it is of great benefit to a mahogany one."

"Why?" asked Marco.

"Because it gives the wood a beautiful variegated appearance when they get it smoothed. So that the more knotted and gnarled a log of mahogany is, the better. It makes the more beautiful wood. But in pine, it is not beauty, but facility of working, which is the great object. So

they always want to get pine as smooth and straight-grained as possible. So that one of these trees that grow detached, in the fields, would not be of much value for lumber. It has so many branches, that the boards made from it would be full of knots."

"That is the reason, I suppose," said Marco, "why they don't cut them down, and make them into boards."

"Perhaps it is," replied Forester.

"Has pine any other very good qualities?" asked Marco.

"I believe it is quite a durable wood," said Forester. "At any rate, the stumps last a very long time in the ground. I have heard it said that there are some stumps in the state of Maine with the old mark of G. R. upon them."

"What does G. R. mean?" asked Marco.

"*Georgius Rex*," replied Forester,—"that is, George, the king. If there are any such, the mark on them means that they belonged to the king of England, before this country was separated from England. In those days, the king's workmen went into the forests to select and mark the trees which were to be cut down for the king's use, and these marks were left upon the stumps."

"And how long ago was that?" asked Marco.

"O, it must have been sixty or seventy years ago. But I can hardly believe that the stumps would last as long as that."

"I mean to ask some of the men, when I get up

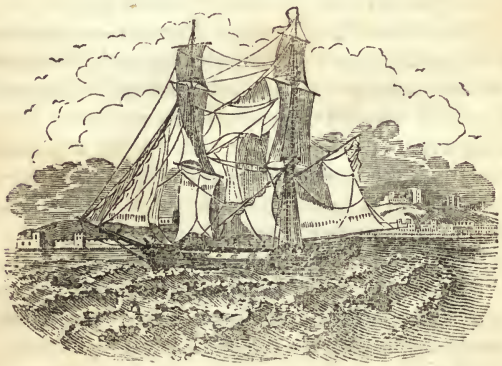
in the woods, how long the stumps do last," said Marco.

"They last very long, I know," said Forester. "The people, after getting tired of waiting to have them rot out, tear them up with machines, and make fences of them."

"I don't see how they can make fences of stumps," said Marco.

"They put them in a row, with the roots in the air," replied Forester. "They make a funny-looking fence."

Just at this time Marco perceived a large town coming into view before them, which, Forester told him, was Bath. There were several ships building along the shore of the river.



CHAPTER VII.

THE BEAR IN THE MILL.

Marco and Forester found a small steamboat at Bath, going up the river, and they took passage in it to Hallowell. At Hallowell, they took the stage, and travelled along the banks of the river, sometimes on one side and sometimes on the other. They crossed the river by means of bridges, which were erected in nearly all the principal towns. They passed a number of waterfalls, where saw-mills had been built for sawing the logs. Marco was astonished at the number of these mills, the quantity of logs which lay in the booms, and the vast piles of boards which had accumulated in some of the sawing villages.

At one of these villages, where he and Forester stopped to spend the night, they went out in the evening to see the mills. The mills were lighted by little fires of pitch-pine knots, which made a bright flame and gave a fine light. These little fires were built upon slabs, which Marco thought was very dangerous. The slabs, however, though they looked dry, were really very wet, being thoroughly soaked with water within, having been

sawed from logs which had been for a long time floating in the river.

The beam, to which the saw was attached in each mill, as it ascended and descended with the saw, passed across these lights with a rapid motion, which made the lights appear and disappear, in regular succession, in a very beautiful manner.

Forester and Marco clambered into one of these mills. They had to make their way over slabs, boards and heaps of rubbish of various kinds, and the floor of the mill seemed to be made of boards and planks, laid loosely and with many open places, in which, when Marco looked down, he saw dark and frightful abysses, where he could hear the water dashing, and, now and then, could get a glimpse of the foam.

Of course, both Forester and Marco advanced very carefully. When they had entered, they found but one man tending the mill. He was seated on a square block of wood, near the fire, eating some bread and cheese. As Forester and Marco advanced towards him, he looked up and bade them good evening.

"Will you allow us to come in and see the mill?" said Forester.

"By all means," said the mill-man.

The mill-man here looked around at the log which he was then sawing, and he observed that it was time for him to attend to it. So he put down his bread and cheese upon the block, and went towards

the saw. Forester and Marco both turned to see what he was going to do.

The log was lying upon a long frame, which frame seemed to be mounted upon some sort of trucks, for it advanced slowly, by a steady motion, against the saw. As the saw was constantly moving up and down with great force, the log was sawed as it advanced. It had now advanced so far that the log had been sawed nearly through, from end to end. When it had gone a little farther, the mill-man pulled a handle, and stopped the motion of the carriage and the log, and, in a moment afterwards, the log began to go back again; the saw, all the time, ascending and descending as before, but without doing any work. When the log had got back so far that the saw came out of the cleft which it had made, the man stopped it, and then, with an iron bar, he shifted the position of the log in such a manner that when the carriage should be put in motion, the saw would cut the log in a new place, at a little distance from the other,—a distance just equal to the thickness of the board which they wished to make.

Marco watched all these movements with great interest. Forester, who had often seen them before, went back to the fire, and held his hands out to it, for, as it was a cold evening, the feeling of the warmth was pleasant. He could see that Marco remained talking with the mill-man; but

the noise of the machinery was so great that he could not hear what they said.

The flashes of light from the fire illuminated Marco's face, however, and Forester could see that he was much interested in what the mill-man was telling him. The mill-man sat down upon the log, and made gestures as if he was eating something. Then he took hold of Marco, and put him down upon the log in his place, and he took a seat himself beyond him—that is, between Marco and the saw. All this time, the log, riding upon the great frame, was slowly advancing against the saw, carrying Marco and the mill-man along with it. When it had carried them so far that the mill-man was getting to be very near the saw, he turned suddenly round, and made a gesture as if he was going to clasp the saw in his arms,—laughing as he did it,—and, immediately afterwards, he got up from the log, and Marco got up, too,—beginning to laugh himself, also, though his countenance had expressed surprise and anxiety before.

A short time after this, when Marco came back to the place where Forester was, Forester asked him what the mill-man had been saying to him.

"He was telling me a story of a bear," said Marco.

"Of a bear?" said Forester.

"Yes," said Marco, "of a bear in a saw-mill."

"I don't see what a bear had to do in a saw-mill," replied Forester.

"It was a great many years ago, when there were bears in the woods about here. There was a man sawing in a mill, and he was sitting on the end of the log that he was sawing, eating his bread and cheese. The bread and cheese were lying on the log, next to where the man was sitting.

"While the man was sitting there in this manner, eating his bread and cheese, a bear came walking into the mill,—a great black bear. He came up to the log, and when he saw that the man was eating bread and cheese, he thought he should like some too. So he sat down on the log."

"On which side of the man?" asked Forester, —"towards the saw or from it?"

"Towards the saw," said Marco. "The man was on the end of the log farthest from the saw.

The bear sat a little beyond him, nearer to the saw, and the bread and cheese was between them. The bear began to eat the bread and cheese."

"How?" asked Forester.

"Why, he took it up in his paws, I suppose," said Marco,—"though I don't know certainly about that. At any rate, he began to eat the bread and cheese,—sitting with his back towards the saw, and his face towards the man.

"And all this time, you must understand," said Marco, "that the carriage was carrying the log, man, bear, and all, towards the saw, and the man saw that if the bear would only keep still, in his place, until he was carried to the saw, he would get sawed in two, and so killed. At first, he thought it would be best for him to get hold of the iron bar, if he could, and beat the old bear's brains out. But he was afraid that he should not succeed in doing that, and so he concluded to wait and see what would happen.

"Now, bears have a way," continued Marco, "whenever they are angry with anything, of grasping it in their arms and hugging it tight. The man did not think of this; he only hoped that the saw would saw the bear in two. The log moved on nearer and nearer, and at last brought the bear along so far that the next stroke cut right down his back. He immediately turned around and seized the saw, and hugged it with all his strength, and it tore him all to pieces."

"Indeed," said Forester. "That is quite a story."

Forester did not seem so much astonished at this account as Marco had expected, but farther conversation on the subject was prevented by the occurring of a new object of attention. The mill-man began to make arrangements for drawing up more logs from the water of the river, by means of a long chain passing around a revolving axis, in the manner which has been already explained.

Marco watched the first log, as it came slowly up, and then he wanted to go down the inclined plane to the water below. The moon was just rising, which gave them sufficient light, and so Forester and Marco went down. Marco wanted to ride up on the next log, but Forester thought that that would be a very dangerous experiment. There was, however, a boat lying there, which, Forester said, perhaps they might get into, and take a little excursion upon the water, by moonlight. Marco thought that he should like that very well, and so he went up into the mill again, to ask permission to take the boat. The mill-man said that they might have the boat all night, if they wanted it.

Marco accordingly returned down the inclined plane, telling Forester that they could have the boat. But Forester, who began to find the evening air too cold and chilly, said that he did not think it was worth while for them to set out on a voyage at so late an hour. But Marco's imagination was so much taken with the idea of a voyage in a boat by moonlight, that he was very urgent to have

Forester go. So Forester consented, and they both got into the boat.

"Which way shall we steer?" asked Marco.

"We must go up the stream," said Forester.

"Why must we?" asked Marco.

"Because there is a dam and a waterfall below us," replied Forester.

There was a dam across the river, at the mill, and the inclined plane, which led from the floor of the mill down to the shore of the river, terminated at the edge of the water just above the dam. The water was so low that it did not fall over the dam near the shore, though Forester and Marco could hear the roaring of the water, which fell over the dam nearer the middle of the river.

"We must take care," said Marco, "or we shall get carried over the dam. I read of an Indian once, who was carried over the falls of Niagara."

"Yes," said Forester; "we must be careful."

Forester turned the head of the boat up the river, keeping near the shore, so as to avoid all possibility of being carried over the dam. The boat shot along swiftly through the water.

"The boat goes very well," said Marco.

"Yes," replied Forester; "and yet it is only a log canoe."

"A log canoe," said Marco. "Is this only a log canoe?"

"That is all," replied Forester. "It is made of a log, hollowed out. They use a great many

such boats on this river. They go very easily with paddles."

Forester and Marco both had paddles. Marco sat about in the middle of the boat, but Forester sat in the stern, propelling the boat and steering it at the same time. When they got up a little way above the dam, they went out farther towards the middle of the river. Forester soon became warm by the exercise of paddling, and had no disposition to return. They both found it very romantic and delightful to glide smoothly over the glassy surface of the water, which was silvered by the moonbeams.

They soon came to a turn in the river, which carried them away from the sight of the mills and the dam, and brought them under high banks, which, in some places, presented rocky cliffs to the view, and, in others, were covered with forests. This scenery had a peculiarly sombre and solemn expression, seen thus, under the light of the moon. Marco gazed at it in silence, and with a feeling of awe.

They went on in this manner for half an hour, until they found themselves approaching a rocky island, crowned with forests. Marco wanted to land upon it.

"Very well," said Forester; "I have no objection; but would you not rather go back?"

"No," said Marco. "I want to explore this island."

"But are you not cold?" asked Forester.

"No," said Marco, "not at all."

"My hands and feet are a little cold," said Forester.

"Then we will go back pretty soon," said Marco, "but first just let us land a minute upon this island."

So Forester turned the head of the boat towards the shore, and Marco, as soon as it touched, scrambled out upon the rocks.

"Oh, Forester!" he exclaimed, at once, "here is plenty of drift-wood. Let us make a fire, and warm your hands and feet."

"Drift-wood?" rejoined Forester. "Will drift-wood make a fire?"

"Why not?" asked Marco.

"I should think it would be too wet," replied Forester.

Marco said no more, but, at that instant, Forester observed a little flash, and then a faint glimmer of light where Marco was. He had lighted a match by rubbing it against some drift-wood. He touched it to some dry bark, and soon had a pleasant little blaze upon the rocks, near the shore. He piled on pieces of drift-wood, such as branches of trees, old slabs, &c., which he found lying about there, and he soon had a very good fire. Forester sat down upon the rocks, and warmed his hands and feet.

"I wish I had a hatchet here," said Marco, "or an axe."

"Why?" asked Forester.

"Why, we could make a camp, and lie here all night," said Marco.

"O, no," said Forester.

"Yes," said Marco, "for the man said we might have his boat all night."

"No," replied Forester. "We will camp out when we get fairly into the forests on Dead river."

Accordingly, after a little time, when the fire had burnt down somewhat, they threw the brands into the river, and then, embarking in their boat, they returned to the mill.

CHAPTER VIII.

THE BIVOUACK.

Marco and Forester had an opportunity to encamp for the night, in the woods, in a manner different from what they expected. It happened in this way. In the course of their rambles among the forests which are about the lakes and the upper branches of the Kennebec, they came, one night, to a farm-house, where they had to spend the night. The house was built of logs. It was in a small opening in the woods. This opening was occupied with fields, which were divided from each other by log fences. The fields were full of stumps. The whole opening was bordered on every side by a perpendicular wall of forest,—the tall stems forming a colonnade, which reminded Marco of the palisades on the North river, just above New York.

There was but one room in this log house, and, at first, Marco did not know where he and Forester were to sleep. There was a great blazing fire in the fire-place, which was made of rough stones. The hearth was made of great flat stones. These stones were tolerably smooth on the upper side;

but, as they were not square, there were many spaces left between them, and at the corners, which were filled with earth. But, though the fire-place was rough, the great fire blazed merrily in it; and Marco thought that it was pleasanter than his father's marble fire-place, in New York, with a grate in it, filled with a hard coal fire, looking like red-hot stones.

"I wish we had such a fire-place as this in New York," said Marco.

"And wood to burn in it," replied Forester.

"O, we can get wood enough in New York," said Marco. "The carmen bring it along every morning. We might have such a fire-place down in the basement, or in that little room in the stable, and then I would go and build fires in it."

Just then, the farmer's wife came with a spider to the fire, to broil some chickens for their supper. She pulled out the coals with a long-handled iron shovel, which she called a *slice*. She cooked the young travellers a most excellent supper.

The farmer and his wife were both rather young. They had one child. He was asleep in the cradle. This cradle was only a box, made of boards, and mounted on rockers. Marco asked the farmer if he made the cradle himself, and he said he did.

There was a boy living in this house, named Isaiah. Isaiah was the farmer's brother. He worked hard all day on the farm, and at night he slept in a sort of garret, which they called the loft.

The way to get up to the loft was by a ladder on one side of the room.

When bed-time came, Forester and Marco climbed up this ladder, and went to bed. They slept upon a straw bed, which was lying in a corner. They had two clean but very coarse sheets, and a good warm coverlid. Marco crept in well under the eaves of the house, but Forester slept on the outer side of the bed, where the roof was higher.

Marco was awaked in the night by a strange sound, which he heard, directly over his head. He lifted up his head and listened. It was the pattering of rain upon the roof. The roof was, however, very tight, and none of the rain came in. The roof was covered with shingles, which the farmer had made himself, in a little shop near his house.

Marco listened to the rain a few minutes, and then went to sleep again. He was glad to hear it rain, because he wanted to stay at this house the next day, and he thought Forester would not go away in the rain.

The next that he knew was that it was morning. He spoke to Forester, saying,

"It rains, cousin Forester."

"Does it?" said Forester. "Then I don't know what we shall do."

"We must stay here, to-day," said Marco. "Then I can see Isaiah make a shingle. Isaiah can make a shingle. Did you know it?"

"I don't hear it rain," said Forester.

"I mean to get up and see," said Marco.

There was no glass window in this garret, but the light shone through the chinks between the logs. There was a wooden window, as Marco called it; that is, there was an opening in the wall, with a wooden shutter to close it. Marco went to this window and opened it. He looked out upon the wild and solitary scene which was before him with great interest. At length he said,

"No, cousin Forester, it does not rain,—but I wish you would stay here to-day."

"Very well," said Forester. "I will stay here as long as you wish."

Marco was rejoiced to hear this; and he spent two hours, after breakfast, in rambling about the farmer's house and grounds. He went into the little shop, and amused himself for half an hour in seeing Isaiah make shingles. Isaiah let him try to make one himself, and he succeeded pretty well. He carried his shingle in to Forester to show it to him.

Forester said he thought it was a very good shingle.

"I should like to carry it home," said Marco; "but I suppose you would think that that would be a foolish plan."

"No," said Forester, "I do not think it would be foolish. The shingle is flat, and will lie down in the bottom of your trunk; and, after you get

tired of it as a shingle, you can have a little box made of it, and keep it all your life, as a memorial of this expedition."

This was a very good plan, for Marco had not shaved his shingle very thin. In fact, it was of about equal thickness at the two ends. This, though a very serious fault in a shingle, made it much more suitable as a material for making a box of.

Marco also amused himself for half an hour in going down to the spring, where the farmer's wife went to get water, and playing there. There was a pleasant little path leading from the house down to the spring. He went down once alone, and brought up a pail half full of water, for the farmer's wife, which seemed to please her very much.

While he was doing these things, Forester remained in the house, writing letters. Before Forester had finished his last letter, however, Marco had got tired of all his amusements, and began to think that they had better resume their journey.

"Very well," said Forester; "whenever you say the word."

"How are you going?" asked Marco.

"I have made a bargain with the farmer," said Forester, "to let us have his wagon to go through the woods about twenty-five miles, and Isaiah is going with us, in order to drive the wagon back."

Marco was much pleased with this arrangement,

and Forester asked him what time they should start. "We are under your direction, you know," said he.

"Yes," said Marco, "and I wish you would let me have the direction all day."

"I have a great mind to do it," said Forester.

"Do," said Marco, "and see how well I'll manage."

"Well," said Forester; "I will give up the command to you till I resume it again."

Marco was quite pleased with his new powers. He said they must take a hatchet and a bag of provisions, for he meant to dine in the woods on the way. Isaiah accordingly put a hatchet in the wagon. They also took some bread and cheese, and some other articles of food, in a bag; and also a tin dipper, to drink from. When all was ready, Marco called Forester, and they set off. Their trunk was put into the wagon behind.

They went on very well for ten miles. The road led through thick forests for a large part of the way, and it was very stony and rough. But the wilderness, and even the difficulties of the way, interested Marco very much. He thought that it was much pleasanter travelling through those forest scenes, the wheels of the wagon sometimes jolting over roots, stones, logs, and sometimes sinking in the mire, than riding in a carriage, as he had often done with his mother, over the smooth and broad avenues leading into New York.

After they had gone about ten miles, they were

brought to a sudden stop by a tree, which had been blown down, and had fallen directly across the road.

"What is to be done now?" said Marco.

Nobody answered.

"What is to be done now, cousin Forester?" repeated Marco.

"I don't know," said Forester. "*I've* nothing to do with it. You are commander."

"Oh, very well," said Marco. "Then I'll decide what to do. We'll chop the tree off with our hatchet."

Marco bustled about with an air of great importance, taking the hatchet from the back of the wagon, and advancing towards the tree, as if he expected to sunder it at a single blow. He looked towards Isaiah, and, seeing a lurking smile upon his countenance, he immediately perceived how absurd was the idea of chopping off such an enormous stem with a hatchet.

He accordingly turned suddenly about, saying,

"No; we can't cut it off with the hatchet. It is too big; or, rather, the hatchet is too little. We'll see if we can't find a way to get around it."

So Marco asked Forester to look on one side of the road, while he and Isaiah examined the other side. They found that, by cutting down one or two small trees, they could get around very well. So Marco directed to have these trees cut down, and then they led the horse around without much

difficulty, excepting a slight obstruction from the bushes.

Marco was quite pleased with the successful result of his management in this first serious emergency. They rode on five miles farther, and then Marco determined that it would be a good plan to look out for a place for their dinner. He chose a place in a pleasant dell, overshadowed by tall pines and hemlocks, and watered by a brook which meandered through the middle of it.

Marco directed Isaiah to drive the horse out to one side of the road, at a place where there was a pretty broad and level spot, which seemed to Marco a convenient place for the horse to stand. Marco told Forester that he and Isaiah might go and employ themselves in finding a good spot for them to make a fire, and in collecting some dry wood, while he fastened the horse. Isaiah accordingly took the axe, and Marco was to bring the bag of provisions.

Marco drew the horse out of the road, and brought his head up near to the stem of a little tree, which was growing there. He then took out the bag, and made his way through the bushes, in the direction in which Forester and Isaiah had gone, down a little cow path, which descended to the bank of the brook.

He found Forester and Isaiah very readily. Forester was seated upon a flat stone near the water, and Isaiah was gathering dry sticks for a fire. It was a warm and pleasant day, and they

wanted a fire, not so much for its warmth, as for the cheerful and pleasant aspect it gave to the place. There was a gentle breeze blowing that day in the open ground. This breeze was not felt among the trees, but it caused a gentle draft of air, which carried all the smoke away from them, and made their seat, on the great flat stone, very pleasant.

"Have you fastened the horse?" said Forester.

"Yes," replied Marco.

"You ought to fasten him pretty strong," said Isaiah, "for he 's very apt to get away."

"O, he won't get away," said Marco; "I fastened him to a good stout tree."

When the fire was burning well, Isaiah and Marco buried some potatoes, which they had

brought with them, in the embers under it. They also put some apples down to roast on a flat stone, which they placed near the fire.

"I wish we had some Carolina potatoes," said Marco.

"What kind of potatoes are they?" asked Isaiah.

"They are sweet. They would be excellent to roast in the woods."

"I never heard of a potato being sweet," said Isaiah.

"Yes," said Marco. "They have plenty of them in New York."

"Then why don't they call them New York potatoes?" asked Isaiah.

"Why, I believe they came from Carolina first," said Marco. "And now I want a long stick for a toaster."

So Marco cut a long stick, and, after he had made the end sharp, he put a slice of bread upon it, and placed it before the fire, and thus toasted the bread. It is remarkable that the business of cooking the food, which, in houses and cities, is considered a disagreeable drudgery, which is to be kept as much as possible out of sight, is always in the woods a very important part of the entertainment, in which all the guests are pleased to take a share.

CHAPTER IX.

THE ENCAMPMENT.

Our party of travellers remained at the place of their bivouac more than an hour. At the end of that time, having eaten all that they had cooked, they began to think of resuming their journey. Marco was sitting upon the stone, wishing that he had put down one more potato to roast, when suddenly he perceived a large grey squirrel upon a log near him. The squirrel ran along the log, and Marco immediately rose and went in pursuit of him.

The squirrel ascended a tree, running up the stem. Then he glided along one of the branches till he came to the end of it, when he leaped through the air and caught the end of another branch, which was growing from another tree. This branch, which was very slender, bent down half way to the ground under the squirrel's weight. Bunny ran up the branch, however, as easily as if it remained level. Thus he went along from tree to tree, following, generally, the direction of the path by which Marco had descended in coming from the wagon.

At length he emerged from the wood, just at the point where Marco had fastened the horse. But all farther pursuit of him, on the part of Marco, was suddenly arrested by the astounding fact, which here burst suddenly upon Marco, that the horse and wagon were gone. Marco looked all about, this way and that, to assure himself that it was the very same place where he had fastened the horse. There could be no doubt of it. There was the very tree to which he had tied him, and the marks of his feet, near it, upon the ground.

Marco was in consternation. He looked all around, and then ran into the road and looked both ways, but no signs of the horse were to be seen. He then hurried back to the edge of the woods and called out in a loud voice:

"Cousin Forester! Isaiah! cousin Forester! our horse has got away."

Isaiah sprang from the seat and ran, quicker than the squirrel had done, up the path. As he came out to the place where Marco was standing, Marco began to say, "There 's where I tied him. I fastened him strong to that tree." But Isaiah paid no attention to what he said, but ran directly to the road. He did not stop to look both ways, but taking the road which led towards his home, he ran along as fast as he could go. Marco followed him as far as into the road, and looked after him as long as he could see him. Isaiah was, however, soon out of sight, and Marco went back to find Forester. Forester was coming up the path very

leisurely, bringing the bag, with the remaining provisions in it, in one hand, and the hatchet in the other."

"Well, cousin Forester," said Marco, "we are in a fine condition. Our horse and wagon have run away, and now Isaiah has run away too."

"I think Isaiah will come back pretty soon," said Forester. "As to the horse and wagon, that is more doubtful."

"And then what shall we do?" asked Marco.

"I don't know," said Forester. "We are ten miles from any house in one direction, and fifteen in another. But I'm not commander. It's nothing to me. I've only to obey orders. I'll do whatever you say."

"Yes, but I should think you might advise me," said Marco. "Generals get advice from their captains and colonels in battle."

"Oh yes," said Forester; "I'll advise you. I think we had better wait first till Isaiah comes back. Perhaps he'll find the horse."

They waited about fifteen minutes, and then Isaiah came back. But he had no horse. He said he went on until he reached the top of a hill where he could see the road for a long distance before him, but that the horse was not to be seen.

"He'll get home before I should overtake him," said Isaiah.

"Yes," said Marco, "unless he stopped where the tree fell across the road."

"True," said Isaiah; "perhaps he has stopped there."

"Or would not he find his way round the tree through the woods?" asked Marco.

"I don't know," said Isaiah; "perhaps he would."

"Is he a pretty sensible horse?" asked Marco.

"Yes," replied Isaiah; "we have to keep th granary door locked, or else he will open the latch with his teeth, and go in and get the corn."

"Then," said Marco, "I've no doubt that he will find his way around the tree and go home; and so we've got nothing to do but to walk back fifteen miles."

"Or forward ten," said Forester.

"Yes," said Marco; "we can go on, to be sure, if we only knew the way."

Here followed a long discussion as to what it was best to do. Marco thought that, if there was any probability that the horse would have stopped at the tree, it would be better for him to go back and get him; but that, if he had got *by* the tree, and had gone home, it would be better for Isaiah to go back and get him, while they went forward to the end of the day's journey. He said that the trunk might be sent on.

Forester was himself very much at a loss to know what it was best to do. As it was farther to go back than it was to go forward, it would be plainly best for them to keep on, were it not for the difficulty of finding their way. But Isaiah told them he

thought they would not have any difficulty on that account, as there were very few roads in such a new country. He said that, if they kept the principal road, they could get along without any trouble.

So Marco and Forester concluded to go on, while Isaiah returned. Isaiah said that he was not afraid to return alone. He said also that, if he found the horse at the tree, he would turn about and come and overtake them. And if he did not find him there, he would walk on home, and come the next day with their trunk.

Marco and Forester then went back to the place where they had dined, and collected together all the food which had been left, thinking that they might possibly have occasion to use it, before getting to the end of their journey. They also took the hatchet with them, and bidding Isaiah good-by, they set forth upon their solitary journey.

The road, though rough and narrow for wheels, was very good for a foot-path, and the travellers went on for several miles without difficulty, and with good courage. There was an unbroken forest on each side of the way, with here and there a solitary bird in the topmost branches, singing in melancholy notes, which echoed far and wide under the endless colonnades of trees. After they had gone on about four miles, they met a man coming with a team, who told them that there was no road of any consequence to turn them off, and that they

would, therefore, probably find their way without much trouble. They were quite pleased to hear this. In fact, it was some relief to them to know that they were right, so far.

Marco was, however, not much accustomed to walk, and Forester, to accommodate him, advanced slowly. When they had gone about five or six miles, the shades of evening began to draw on. The days were getting shorter at this season of the year, and then, besides, it happened that, on this evening, there were some dark clouds in the west, and the sun was darkened behind them before the regular hour of his going down. Then, besides, the trees of the forest made it darker in the road in which Marco and Forester were travelling.

Now, just as it was thus beginning to grow dark, they happened to come to a place where the road divided, and Marco and Forester were both puzzled to decide which was the one which they must take. The roads seemed to be nearly equally travelled, though it was so dark that they could not see very well. They examined both as carefully as they could, and finally decided according to the best of their judgment, and went on.

They had some doubt whether they were right, and Forester thought, as they proceeded, that the road appeared somewhat different from the one in which they had been travelling. However, they thought it best to go on. After advancing about two miles, in a very circuitous direction, they

came at last to a place where several trees seemed to have been cut away, and there were remains of several log huts. Marco was very much interested in this discovery, and he wanted to examine the huts very particularly. But Forester, when he found that they were not inhabited, thought it best to lose no time, especially as it was now beginning to be quite dark, and he urged Marco to leave the huts and press on.

They went on for half a mile farther, when Marco, seeing a glimmer through the trees, exclaimed that they were coming to some water.

"So it is," said Forester. "It looks like a pond or a river. If it is a river, we 're lost."

They walked on a short distance farther, and then they began to hear the rippling of the water. In a few minutes, they were down upon the bank. It was a small river, flowing rapidly along, between banks overhung with bushes. Marco looked for a bridge, or for some place to cross, but they found none. In fact, the road did not go down to the water, but seemed to lose itself among the trees, before reaching the bank.

"This is not our road," said Forester. "We must go back."

"What road can this be?" asked Marco. "It seems to lead nowhere."

"I presume it is a logging road," replied Forester.

"What do you mean by that?" asked Marco.

"Why, I suppose that those huts must have

been a logging camp, where the men lived in the winter, when they came here to cut logs; and this is the road that they drew the logs by, down to the water. But this summer it has been neglected. They don't cut the logs in the summer."

"And what shall we do?" asked Marco.

"We must go back to the place where the road branched off," replied Forester.

"Or else go and stay in the huts all night," said Marco.

"Yes," replied Forester, "we can do that. Let us go back and see."

They accordingly went back to the huts. Marco asked Forester whether he thought they had better stay there.

"I don't know," said Forester. "Let us strike a light, and see how the huts look."

Marco took out his match-box, and, after first gathering a few dry sticks, he struck a light, and soon made a little fire. They found a birch tree growing near, and they stripped off some pieces of the bark. These they laid upon the fire, holding the ends of two long sticks upon them, in such a manner, that, as the pieces of birch bark curled up under the influence of the heat, they curled around the ends of these sticks, thus making flambeaux. These flambeaux, though of rude construction, gave a very excellent light, and Marco and Forester walked about the huts, waving them in the air, and illuminating the whole scene in a very brilliant manner.

They found that the huts were in a ruinous state. Only one of them had a roof, and that had been originally made of hemlock branches, which had now become entirely dry by long exposure. This covered hut was only a sort of booth, being entirely open on one side. Forester said that he recollected having heard of such huts, and that the men built their fire, not in them, but on the ground opposite the open side.

Forester and Marco concluded to remain in this hut for the night. They got together a great many hemlock branches, which they spread in the bottom of it for a bed, and they built a fire opposite the open part, to keep them warm.

Marco took a great interest in this fire. He piled the dry sticks upon it until he had a very warm and cheerful blaze, and then he collected by the side of it a heap of fuel, to use during the night.

In fact, Marco raised his fire too high; for, from the column of smoke and sparks, one little brilliant fragment lighted upon their roof; and it was slowly burning and smoking there, while Forester and Marco were opening their bag of provisions, to see what they could make out for supper.

Marco was counting out the potatoes, saying, "two for you, and two for me," when his attention was arrested by a spark which, at that instant, fell into his lap. He looked up to see where it came from, and saw that the fire, which had spread from the original spark which had fallen upon the roof,

had burned a hole through, and the air, which was drawn up through the opening, was at that moment fanning it into a flame.

Marco ran out, calling out, "Get some water! Get some water!"

There was plenty of water in a brook, which flowed with a murmuring sound down a little glen behind the huts, but there were no buckets, and Marco called in vain. It would have been equally useless to have raised an alarm of fire, as there was nobody within ten miles to hear the cry. The flames spread rapidly, and Forester and Marco soon saw that there was nothing to be done but for them to stand quietly by and witness the conflagration. The flames rose very high and raged fiercely, and the light shone far into the forest, bringing into distinct view the whole scene around, which had been involved in deep obscurity. The roof was soon consumed, but the logs, of which the walls had been built, were much longer in burning. The fire made by these logs, when they fell in together upon the bed which Forester and Marco had prepared, was so intensely hot that it could not be approached for a long time.

As soon as the intensity of this fire had a little declined, Forester said that they must go to work and build themselves another hut. They examined the ruins of those which remained, but they concluded that it would be better to build a new one than to attempt to repair one of these. They accordingly determined to build one anew.

They found two young trees, growing pretty near each other, which had branches about six feet from the ground, so situated that they could place a strong pole across from one tree to the other, resting the ends upon the branches. This, Marco called the ridge-pole. They then cut other poles, which they placed with the end on one side upon the ground, and the other ends upon the ridge-pole. These were rafters, and upon the rafters they placed a great many branches of hemlock, which formed a roof. This roof, however, was only upon

one side. The other side of the hut was open, and they built a fire opposite this opening, feeling safe in regard to their roof, as it was made of green branches.

This work occupied them an hour. At the end

of that time, they put their potatoes into the fire to roast, and then laid down upon the hemlock beds which they made, to rest themselves a little while, till the potatoes should be done. Wearied with their long walk and the labors of the evening, they fell asleep, and did not wake again till four o'clock the next morning.

CHAPTER X.

LOST IN THE WOODS.

When Marco awoke, he at first supposed that he had been asleep about an hour, and he was surprised to see how much the fire had burned down in that time. He crept towards it, and began to put the brands together, when suddenly he recollected the potatoes. So he began to feel for them in the ashes, by means of a long stick, which they had obtained for a poker. The potatoes were all burnt to a cinder.

Marco then awoke Forester, saying,

"Cousin Forester! cousin Forester! wake up. The fire has gone out, and our potatoes are all burnt up."

Forester awoke, and, after looking at the fire, and at the charred and blackened remains of the potatoes a moment, he took out his watch, and said,

"Why, Marco, it is four o'clock. It is almost morning."

"Is it?" said Marco. "Then we have not got much more time to sleep. Let us build up a good fire, and then lie down again."

"Yes," replied Forester. "We must keep up a good fire, or we shall take cold, it is such a cool night. It looks as if it were going to rain."

"What shall we do in that case?" asked Marco.

"I don't know," replied Forester. "It would be rather a hard case for us."

"We could stay here, I suppose," said Marco. "I don't think the rain would come through our roof."

"No," said Forester, "not much. But then we have nothing to eat."

"Could not we get anything to eat about here?" asked Marco.

"Not very well," replied Forester. "We have got money enough, but this is a case where money does not seem to be of any use."

"How do the men who come here in the winter to cut down the trees, get anything to eat?" asked Marco.

"O, they bring it all with them," said Forester. "The roads are better, in the winter, for sleds and sleighs, than they are now for wheels; for then all the stumps and roughnesses are covered up with the snow. So, wherever there is a camp, there is a road leading to it, and sleigh loads of provisions are brought up for the men, from time to time, all the winter."

"I wish one would come now," said Marco, "to us."

"I wish so too," said Forester. "But it is of

no use to wish, and so we may as well lie down and go to sleep again."

"But, Forester," said Marco, "I don't see what we are going to do if it rains."

"Nor do I," said Forester. "But this is not the time for forming a plan. This is the time for going to sleep. I make it a rule, in all perplexities and troubles, when there is nothing to be done immediately in order to get out of them, to lie down and go to sleep."

Marco said no more, and Forester was soon asleep again. Marco himself felt so much concern about his situation that he could not go to sleep for some time. He lay watching the flames, which were creeping slowly around the logs which he and Forester had put upon the fire; for, while they had been holding the conversation above described, they had been employed in replenishing the fire.

Marco heard a sound, which, at first, he thought was a bear. He was on the point of awakening Forester, but, after listening a little longer, he concluded that it was only the roaring of the wind upon the tops of the trees. After lifting his head from his pillow of hemlock branches for a moment, until he satisfied himself that it was no wild beast, he lay down again and went to sleep.

He was awakened again, about three hours afterwards, by a long rumbling clap of thunder.

"What is that?" said Forester. "Thunder?"

"I believe it is," said Marco.

"And it rains, I believe," said Forester.

Marco raised his head, and looked out through the open part of the hut. He saw the drops of rain descending, and he heard the murmuring sound which the rain makes when falling upon the leaves in a forest. He saw, too, that everything was wet in the opening about the hut, although it seemed dry in the forest beyond, where the drops of rain had been intercepted by the leaves of the trees.

"We must get our wood under cover," said Marco, "or it will get wet and won't burn, and then our fire will go out."

"True," said Forester. "There is room for some of it in this hut. Let us get up and put it in."

So Marco and Forester arose, and, as they were already dressed, they were soon at work, putting the logs into the hut. Marco then proposed that they should go into the forest, where it did not rain, and get some more wood. But Forester said he thought that would be of no service, as they had no provisions, and, of course, could not stay there. "We *must* go," said he, "at any rate, whether it rains or not; for it is better to get wet than to starve."

"We have got *something* left in our bag," said Marco.

"Yes," replied Forester, "just enough for breakfast."

"How I wish I had a bushel of potatoes," said

Marco. "Then we could stay here a week. Only we should want a little salt too."

Forester opened the bag and took out the provisions which were left. They found about enough for a breakfast for them, but they concluded to eat but half of their supply, as Forester thought it was best that they should put themselves upon short allowance.

"You see, it is *possible*," said Forester, "that we may be kept here in the woods a day or two; so we must use our provisions economically."

After breakfast, they went into the forest a little way, where they found that they were protected from the rain by the trees. This proved, as Forester said, that it had not been raining very long; and he thought, from appearances, that it would soon clear up.

At a little distance from their encampment, they found another hut, which was in better condition than either of those which they had seen before. It was covered with strips of birch bark, which made a very good roof. Some of these strips, or rather sheets, for they were quite large, had fallen down, and Marco ran and got one of them, exclaiming,

"What a monstrous sheet of birch bark!"

This sheet, which Marco lifted up from the ground where it was lying, was about four feet long and two feet wide. Marco wondered that so large a sheet could be got from any tree.

"What a monstrous tree it must have been!" said he to Forester.

"No," said Forester, "not very large. This sheet is about four feet long, which would make the tree only about sixteen inches in diameter."

"How do you prove that?" asked Marco.

"Why, the distance through a tree is about one third the distance round it," replied Forester. "Now, this bark grew around the tree, and it is about four feet long. Four feet is forty-eight inches, and one-third of forty-eight is sixteen. Now, sixteen inches in diameter would not be a very large tree."

"I mean to try this bark on some of these trees," said Marco, "to see how big a tree it will fit."

So Marco took up the sheet of bark. It was white and clean, especially on the outside, having been blanched by the summer rains. Marco, in order to carry the sheet more easily, put it upon his shoulders, drawing it up around his neck like a shawl.

"Cousin Forester," said he, "see my shawl. It would do for an umbrella, if I only had a handle."

So saying, Marco drew the sheet of bark up higher, holding it in such a manner that it covered his cap, rising into a point above his head. He held it in such a manner as to leave a little crevice open in front, to peep through, in order that he might see where he was going.

"See, Forester," said he,—"see my umbrella."

Forester looked at Marco's contrivance, and he

immediately thought that such a sheet would be an important protection to the head and neck, in case they had to walk in the rain. He accordingly went to the hut and selected a sheet for himself, saying,

"This is not a bad plan. The most important point is to protect the head and neck, and this will do it pretty well. We can roll the sheets up and carry them under our arms, unless it rains fast, and then we can wrap them around us."

Having thus found a rude substitute for an umbrella, Forester thought that it would be best for them to set out on their journey. They accordingly returned to their encampment, and made preparations for resuming their march. As it was raining but very little at that time, they rolled up their umbrellas and carried them under their arms. Marco took the hatchet, and Forester the bag of

provisions. Marco wanted to set fire to the hut which had sheltered them for the night. He wanted Forester to hear what a loud crackling the green hemlock branches, which they had put upon the roof, would make, when the flames from the wood below should envelop them.

But Forester would not consent to this. He said that some accident might possibly happen, by which they should be obliged to come back and spend another night there, though he hoped such a measure would not be necessary.

"I hope so, too," said Marco.

"We may lose our way again," said Forester.

"But then," said Marco, "we shall not come back to this place."

"Why, I have heard," said Forester, "of people losing their way in the woods, and, after a great deal of wandering, getting back to the place they started from. So that, *possibly*, we may wander about all day, and get back here at night."

"I hope not, I 'm sure," said Marco. "I am tired of this old hovel."

"Why, the lumber-men stay in these places all winter," said Forester.

"Yes," replied Marco, "but then they know that they can get out whenever they please. We don't know that we can ever get out."

"That is true," said Forester, "and it makes a great difference."

"Don't you feel concerned about our finding our way out?" asked Marco.

"No," said Forester. "I make it a rule never to be *concerned* about anything."

"Oh, Forester!" said Marco,—"I think we ought to be concerned when we get lost in the woods."

"No," replied Forester. "We ought to do the best we can to get out, but not to be concerned. To be concerned is to be anxious and unhappy. This does no good. Being concerned would never help us find our way out of the woods."

Thus talking, the two unfortunate travellers walked on, with their rolls under their arms. It was well that they took them, for, after they had been walking about half an hour, the sky grew dark, and, a short time afterwards, the rain began to come down in torrents. Forester and Marco unrolled their umbrellas, and wrapped them about their shoulders and heads; and, at the same time, they fled for shelter under an enormous pine tree, which grew in such a spot that its branches extended in every direction, and formed a canopy above them, which kept off a great deal of the rain. When the rain abated a little, they walked on.

Their plan was to get back to the place where they had left the main road the day before. But they were somewhat perplexed to find it. In fact, they met with several roads which branched off from the one in which they were walking. These were old tracks, made by the lumber-men, and were partly grown up to bushes. They wandered about among these paths for some time, and at last, to their

great joy, they came out into a good beaten road, which Forester immediately thought was the one which they had been travelling in the day before. Notwithstanding Forester's philosophical resolution, never to be *concerned*, he could not help confessing that he felt somewhat relieved to find the right road again; and, as the sun was just breaking through the clouds at this time, they both thought that their prospects were brightening considerably.

CHAPTER XI.

THE SHINGLE WEAVER'S.

The travellers walked on with fresh strength and courage, now that they thought they were in the right road. The road was, however, monotonous, being, for most of the way, through a dense forest; and it was so very similar to the road by which they had come the day before that they were convinced they were now right.

They went on, without any special adventure, for nearly two hours, when they arrived at what had the appearance of being an old wood road, which branched off at right angles to the one in which they were travelling. The trees were somewhat more open here. This admitted the sun; and there were several raspberry bushes growing at the entrance of the wood road, with ripe raspberries hanging upon them, for the season of raspberries had now arrived.

Marco seized this fruit with great avidity. Forester followed his example, and began gathering the berries. The bushes were, however, not entirely dry, and they had to advance cautiously among them. In fact, they found it better to keep

along the wood road, gathering the berries as they advanced. It was not a road, strictly speaking, for there were no marks of wheels upon it, or tracks of any sort, made by travelling. It was only a space for a road, made by cutting away the trees and bushes.

Along this opening, Forester and Marco slowly advanced, eating the raspberries which grew by the side of the way. After going on for a few rods in this manner, Marco suddenly exclaimed,

"Why, here is another camp!"

Forester looked up and saw, just before them, the remains of a sort of hut, somewhat similar to those which they had seen the evening before. There was a large heap of chips and shavings about it.

"What can this be?" asked Marco.

"I presume," said Forester, "that it is an old shingle weaver's establishment."

"What is a shingle weaver?" asked Marco.

"A man who makes shingles," replied Forester, "such as they use for covering houses. They make them of clear straight-grained pine, which will split easily and true."

So saying, Forester advanced towards the hut, and took up one of the pieces of pine, which had been split out for a shingle. There were several of such pieces lying about among the chips and shavings. It was somewhat browned by exposure to the weather, but it had a very smooth and

glossy appearance, shining with a sort of silken lustre.

"This is a beautiful piece of pine," said Forester.

"Let us carry some of it home," rejoined Marco.

"What good would it do us?" asked Forester.

"Why, we might make something of it," said Marco. "Perhaps I could make a little box."

"And that would serve as a *souvenir* of this expedition," added Forester.

"A souvenir?" said Marco,—"what is that?"

"Why, something to remember it by," replied Forester. "Hereafter, whenever you should see the box, you would be reminded of our wanderings and perils in this wilderness."

"Well," said Marco, "let us take it."

The farther conversation of our adventurers was interrupted by a sound, like that of wagon wheels, coming along the main road, which they had just left.

"There comes some traveller," exclaimed Forester. "Let us go and enquire about our way."

"Hark!" said Marco.

At this instant, the sound of the wheels suddenly stopped, and Marco and Forester heard the voice of a man calling out earnestly to his horse, "Whoa! whoa!" as if something had happened. Marco and Forester hastened to the spot, where they found that the horse had fallen down, and the man was trying in vain to get him up. The harness

was drawn so tight about the horse's limbs, by the constrained position in which he was lying, that he could not get up, and the man could not extricate him. The man had gone behind, and had drawn the wagon back, so as to loosen the pressure of the harness upon the horse, but, until Forester and Marco came, there was no one to unbuckle the straps when they were thus loosened; and, if the man let go of the wagon, to go and unbuckle the harness, it was drawn back again at once by the tension of the straps, and made as tight as before.

He was, therefore, very glad to see Forester and Marco coming. He asked them to come and help him.

Forester and Marco were immediately going to attempt to unbuckle the harness, but the man told them that there was danger of their getting kicked by the horse, in case he should suddenly begin to struggle.

"Come here," said the man, "and hold the wagon back, and I will loosen the harness."

By means of this plan of operations, the horse was soon liberated from his confinement, and he got up. The man seemed very thankful to Forester and Marco, and he asked them where they were going.

"We are going to No. 3," said Forester. "Is this the right way?"

The townships in a new country are *numbered* at first, not named. The place to which Marco

and Forester were going had yet very few inhabitants, and it had no name but No. 3.

"Yes," replied the man, "this is the right road. I wish I was going that way, I would take you along in my wagon."

This answer puzzled Marco a little, on two accounts. First, the man *was* going the same way with them, but then Marco thought that, perhaps, he was going to turn off, pretty soon, into some other road. Then, secondly, he did not see how the man could possibly carry him and Forester, in any event, as the wagon seemed completely filled with bags, and kegs, and firkins, leaving scarcely room for the man himself to sit.

Forester told the man that they could walk very well; but he said that they were hungry, and if the man had anything to eat, in his wagon, they should be glad to buy something of him.

"Yes," replied the man, "I've a loaf of bread that I can spare, and a jug of milk."

"That will be just the thing," said Marco.

At first, the man was not willing to receive anything for the bread and milk, but as Forester insisted upon it, he consented to take a little pay. He then told Forester that he had some honey in his wagon, and a few apples, and Forester bought a supply of these. At first, they thought they should not have anything to put the honey in, but Marco ran to the shingle weaver's hut, and got one of the thin pieces which had been split out for shingles, and it made a very good plate. Forester

bought a pound of the honey, and half a dozen apples.

They then bade the man good-by, and he resumed his journey. Forester and Marco went back to the hut, where they had a most excellent dinner. They built a fire, and roasted the apples and toasted the bread. They cut it into slices with Marco's knife. They made wooden spoons for the honey out of pieces of pine, which answered very well indeed. Marco said it was the very best dinner he ever ate in his life.

After dinner, they returned to the main road, and resumed their walk. Forester said he wished he had asked the man how far it was to No. 3, but he thought it could not be very far, as they had been travelling nearly three hours, and it was only about ten miles in the morning.

As he was saying this, they were just ascending a hill, and when they reached the top of it, they had a prospect of the road for a considerable distance before them. Marco thought he saw something coming, and he asked Forester what it was.

"I think it is only a stump, or something like that," said Forester.

"No, it moves," said Marco.

"It is another wagon," said Forester, "I really believe. Now we can find out how far it is to No. 3."

It was very soon quite evident that it was a wagon, and that it was coming on apace. As it drew nearer, it appeared that there was a boy in it.

"He is just about as big as Isaiah," said Marco.

"Yes," said Forester. "And the horse looks very much like the horse Isaiah had."

"I verily believe it is Isaiah," said Marco.

This supposition was confirmed as the wagon drew near. The boy was Isaiah, but he stared at Marco and Forester with a look of perplexity and wonder, as if he was very much surprised to see them.

"Isaiah!" said Marco, accosting him, as soon as Isaiah drew up the reins and stopped the horse opposite to them.

"What are you coming back for?" asked Isaiah.

"Coming back!" repeated Forester, not knowing exactly what Isaiah meant.

"Yes," said Isaiah. "I thought you were going to stay at No. 3, and I was going to carry your trunk there."

It immediately flashed upon Forester's mind that they had got turned about in their wanderings, and, instead of going on towards No. 3, as they supposed, they were in reality, though in the right road, going the wrong way in it.

Forester had a hearty laugh at this discovery, in which Marco joined, as soon as he fairly understood the case. At first, he was very much perplexed. He could not believe that they could have got their ideas of direction so completely reversed.

"Besides," said he, "that man told us that we were in the right way."

"Yes," said Forester, "but he did not tell us that we were *going right* in it."

"I suppose he did not know which way we were going," said Marco.

The question then arose, what was to be done. Forester proposed that they should get into the wagon and let Isaiah drive them to No. 3, but Marco said that he was commander, and he was not going to try to get to No. 3 any more. He had been travelling back and forth through those woods long enough, and he declared that he would not vote to go through them again, if he had to go round the world to get to the other side of them.

Forester laughed and submitted to the decision; so they all returned to Isaiah's father's.

The next morning they formed a different plan for pursuing their journey. They wanted to get to the Quebec road now, as soon as possible, and they found, by enquiry, that, by taking a boat upon a large pond or lake, a few miles distant, they could go about twenty miles by water, through a chain of ponds, which led in the direction in which they wished to go.

So Forester hired a man to go with them and bring back the boat. They went, in a wagon, to a place very near the landing, at the pond. The landing was in a small cove, surrounded by forests. The cove opened out into the pond by two points of land, rocky and precipitous, and crowned with evergreen trees. The water was smooth, and the

whole scene highly picturesque. When Marco came in sight of it, he was much pleased with the prospect of a voyage on such a sheet of water.

There was considerable water in the boat when the party arrived on the beach, and Forester undertook to bail it out. The man who was going with them went and cut a bush, with a thick top, to use as a sail, in case there should be a fair wind. While he was bringing the bush, and Forester was bailing out the boat, Marco stood upon the beach, looking at the paddles.

"Does she leak, cousin Forester?" asked Marco.

"No," said Forester, "I presume not. This water all comes from the rain."

"I'm glad to hear that," said Marco, "for I don't want to go to sea in a leaky ship."

There was a great basket of provisions on the

beach, by the side of Marco, while these preparations were making, for they were resolved not to expose themselves, a second time, to the danger of famine. When all was ready, the bush, the basket and the paddles were put on board, and our adventurers, after gliding smoothly through the water to the outlet of the cove, doubled one of the rocky points of land, and pushed boldly out upon the waters of the pond.

CHAPTER XII.

A VOYAGE ON THE POND.

As the boat moved on, propelled by the paddles, which Forester and the man who accompanied them were plying, Marco sat upon a thwart, and gazed upon the picturesque and romantic scene around him. The shores of the lake, or pond, formed many beautiful points and promontories, with deep bays between them. There were a great many islands too, scattered over its surface. Marco wanted to land upon some of these, but Forester thought that they had better make the best of their way towards their destined port.

Marco contented himself, therefore, with gazing on the changing scenery, as they passed, in succession, one island and promontory after another. The whole country was covered with forests, except that here and there was an opening, with the house and barn of a settler in the middle of it. Smokes were rising, too, in various directions, where new clearings were in progress. There was one in particular, on the side of a distant hill, which rose in such dense white volumes as especially to attract Marco's attention.

When Marco had admired these objects long enough, he leaned a little over the side of the boat, and began to look down into the water. The water was not deep, and the bottom was smooth and sandy. They glided rapidly along over these sands. Marco's leaning caused the boat to incline a little to one side; but Forester, instead of asking him not to lean over so, just moved himself a little in the contrary direction, and thus restored the equilibrium.

"There, Forester," said Marco, suddenly raising himself, "I forgot one thing."

"What is that?" said Forester.

"I forgot my piece of wood to make a box of."

"I am very sorry," said Forester. "But then you can get another piece, perhaps, before we get to the end of our journey."

"But I wanted a piece from that very hut, so as to make the box a souvenir of our having got lost in the woods," said Marco.

"Yes," rejoined Forester, "that would have been very pleasant,—but, perhaps, we shall meet with some other odd adventure, which will be as good as being lost in the woods."

"I don't think being lost in the woods is anything very good," said Marco.

"It is not a very good thing at the time, but the recollection of such adventures and dangers is always pleasant afterwards. You see you specially want a souvenir of it.

"But, Marco," continued Forester, "I have

thought of something which will be, perhaps, better than a box. At any rate, it will be more convenient to make."

"What is it?" said Marco.

"A little press for pressing flowers," replied Forester.

"How could I make it?" asked Marco.

"Have two pieces of pine wood, planed out thin," said Forester. "They might be varnished, and that would make them look very neat and pretty."

"How large must they be?" asked Marco.

"Oh, about as large," replied Forester, "as the covers of a small book. Just large enough to make it convenient to carry in the pocket. Then you must have some pieces of soft paper, of the same size and shape, to put between them. You must also have a piece of cord or braid, or something of that kind, to tie around them, to keep them together. Then, when you are travelling, if you find any pretty flower, you can put it into this press, and put the press in your pocket. Thus, the press will not only be a souvenir itself, but it will procure for you a great many other souvenirs."

"That 's an excellent plan," said Marco. "I like it very much. That will be better than a box."

"It will be easier to make, at any rate," replied Forester. "Any joiner can plane out and square the boards for you."

"Yes," said Marco. "I mean to get a piece of pine to make them of, the first time I find any."

Marco had an opportunity to get a piece of pine suitable for this purpose, and, at the same time, a souvenir itself of an adventure, sooner than he anticipated; for, after having paddled many miles, towards noon a breeze sprung up, which, though really not against them, retarded them somewhat, as it tended to drive them out of their course. Their intention had been to have stopped upon the water, about noon, to eat their dinner; but, as this breeze would prevent the boat from remaining at rest, they concluded to land upon an island, which was near where they were at the time, and take their dinner there. Marco was particularly pleased with this plan, as it would enable him to build a fire, and he always wanted to build a fire on such occasions, whether there was anything to be cooked by it or not.

The island was rocky, and it was covered with trees. On the sheltered side of it there was a beach, where the party landed. Although this beach was somewhat protected from the wind, still the waves which rolled in kept the water in a state of agitation. They, however, landed here, running the head of the boat upon the sand.

There was a large tree lying here, with its top in the water, and but-end upon the beach. It was a tree which some settler had cut down at some place near the shore of the pond, and when the water was high it had been washed off, and, after drifting about the pond for some time, it had got lodged upon this beach, where it remained in the

position in which our adventurers found it. It had been lying there for more than a year, and the branches which were out of the water were dead and dry. The foliage had long since disappeared.

The boatman brought the boat up alongside of this tree, so that Forester and Marco stepped out upon the trunk, and walked to the land. The boatman then tied the boat to one of the dead branches of the tree, and, taking the basket of provisions and the hatchet, they all walked along, in search of a place for their dinner.

They found a sheltered and pleasant place, at a little distance, under the trees. Marco soon struck a light, and began to build a fire. He found it somewhat difficult, however, to procure dry wood enough for the fire, until, at last, he thought of the branches of the tree to which the boat was fastened. He accordingly went to the place and began to cut them off.

The boat was somewhat in the way while he was doing this, and he thought he would move it. He could fasten it just as well, he thought, by a stake driven into the sand. He therefore cut off one of the branches, and, after squaring one end and sharpening the other, he drove it down as well as he could into the sand. He then fastened the boat to this stake, thus removing it from the tree, and clearing the way so that he could conveniently cut off the branches.

This was not, however, a very wise operation,

for it is very difficult to drive a stake securely into sand. Sand, even when wet, has so little tenacity that it yields to the slightest force, and the stake soon began to work loose, by the motion of the boat, agitated by the waves; and, in fact, before Marco had finished carrying away the branches, the stake was entirely loosened from its bed, and was just ready to topple over.

As the boat continued to pull upon it, this way and that, as it was agitated by the fluctuation of the water, it soon drew it down, and the boat, being now entirely at liberty, began to move slowly off from the shore. It soon drifted out where it was more fully exposed to the action of the wind, when it began to move much faster. And thus, while our party of voyagers were eating their dinner, seated on a flat rock, by the side of a good fire, in fancied security, their boat was quietly drifting away, thus apparently cutting them off from all communication with the main land.

Marco made the discovery that the boat was gone, just after finishing his dinner, and he immediately gave the alarm. Forester and the boatman came at once to the spot. They could just see the boat, half a mile distant, under a ledge of rocks, which formed the shore in that place.

This was the third time, on this journey, that Marco had found himself isolated in circumstances of difficulty and danger, and cut off, apparently, from all convenient means of retreat; and, at first, he thought that this was the worst and the most

dangerous of the three. In fact, he did not see in what possible way they could escape.

"What shall we do?" asked Forester.

"We must make a raft, somehow or other," said the boatman. "If I had a log, I could go after the boat on that."

"Won't this tree answer for a log?" asked Marco.

The boatman looked at the tree. He said that, if he had an axe, he thought he could cut off the top, and roll the trunk into the water; but it would take him a long time, he said, to hack it off with the hatchet.

There seemed to be, however, no alternative; so he set himself at work, and in due time he cut off the stem of the tree, just where it entered the water. They all three then took levers, which the boatman made with his hatchet, and, by making great exertion, they got the log out of the sand, and rolled it round into the water, where it floated. The man then cut a long pole, and, mounting upon the log, he pushed himself out over the surface of the water.

Forester and Marco watched his progress with great interest. Marco thought that he would certainly roll off the log, but he seemed to stand and to walk upon it, perfectly at his ease. He would advance to the forward end of the log, and then, planting the foot of his pole in the sand on the bottom, he would push, walking along as the log advanced, until he came to the stern end of the

log, when he would draw out his pole, and walk back again. In this way he propelled the log until the water became too deep for his pole to reach the bottom, and then he ceased these efforts, and, standing upright, he left himself to be driven along slowly by the wind.

Forester and Marco saw plainly that he would be gone for some time, and they amused themselves, during his absence, in wandering about the shores of the island. In one place, Marco found, upon a rock a little above the water, a slab of pine wood, which was bleached by the sun and rain. It had drifted down, the summer before, from some stream emptying into the pond. In the winter it had been frozen into the ice, and, when the ice broke up on the following spring, the cake to which the slab was attached, had been crowded up upon

the shore, where the slab had been left when the ice melted.

Marco immediately thought that this slab would furnish him with a good piece of wood to make a flower press of, and he accordingly dragged it up where he could work upon it with his hatchet. He soon cut off a piece, of the proper length, and hewed it down so as to make it of a convenient shape to carry.

When Forester came to examine it, he said he thought it was a very good piece, and when it was planed smooth and varnished, he thought, from its appearance, that it would be of a very pretty color.

"You can get it made at the first shop we come to," said Forester, "and then you can collect and preserve a great many flowers in it, when we get to Canada. When you get home, you can put them in a book, and call them the Canadian Flora."

"That 's just what I 'll do," said Marco, "and then, when I get home, I 'll give some of them to my cousins. They will like them, because they came from Canada. But I can 't put a great many into such a press."

"No," said Forester. "You only collect them in the press, which you always carry with you in your pocket. You put them all in a book, or in a larger press, as soon as you get home, and then you have the small press ready for use again."

While they were talking thus, they watched the

boatman, who had, by this time, reached the land and recovered the boat. He came back quite rapidly, propelling the boat with the paddle. Marco and Forester embarked on board of her, and they finished their voyage without any further adventure. The next day, they reached the Quebec road, and, leaving the region of the Kennebec, they went on their way towards Canada.

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